S. HRG. 100-176

NOMINATION OF KENNETH C. ROGERS

HEARING

BEFORE THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS UNITED STATES SENATE

ONE HUNDREDTH CONGRESS

FIRST SESSION

ON THE

NOMINATION OF KENNETH C. ROGERS TO BE A MEMBER OF THE NUCLEAR REGULATORY COMMISSION

JULY 9, 1987

Printed for the use of the
Committee on Environment and Public Works

U.S. GOVERNMENT PRINTING OFFICE

76-061 WASHINGTON : 1987

For sale by the Superintendent of Documents, Congressional Sales Office
U.S. Government Printing Office, Washington, DC 20402

S321-22

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

QUENTIN N. BURDICK, North Dakota, *Chairman*

DANIEL PATRICK MOYNIHAN, New York
GEORGE J. MITCHELL, Maine
MAX BAUCUS, Montana
FRANK R. LAUTENBERG, New Jersey
JOHN B. BREAUX, Louisiana
BARBARA A. MIKULSKI, Maryland
HARRY M. REID, Nevada
BOB GRAHAM, Florida

ROBERT T. STAFFORD, Vermont
JOHN H. CHAFEE, Rhode Island
ALAN K. SIMPSON, Wyoming
STEVE SYMMS, Idaho
DAVE DURENBERGER, Minnesota
JOHN W. WARNER, Virginia
LARRY PRESSLER, South Dakota

PETER D. PROWITT, *Staff Director*
BAILEY GUARD, *Minority Staff Director*

CONTENTS

OPENING STATEMENTS

	Page
Breaux, Hon. John B., U.S. Senator from the State of Louisiana	2
Burdick, Hon. Quention N., U.S. Senator from the State of North Dakota	1
Lautenberg, Hon. Frank R., U.S. Senator from the State of New Jersey	3
Simpson, Hon. Alan, K., U.S. Senator from the State of Wyoming	5
Symms, Hon. Steve, U.S. Senator from the State of Idaho	4

WITNESSES

Bradley, Hon. Bill, U.S. Senator from the State of New Jersey	6
Rogers, Kenneth C., nominee to be a member of the Nuclear Regulatory Commission	8
Responses to a committee questionnaire	34

ADDITIONAL MATERIAL

Letters:	
Guarini, Hon. Frank J., a Representative in Congress from the State of New Jersey	7
Humphrey, Hon. Gordon J., U.S. Senator from the State of New Hampshire	25

NOMINATION OF KENNETH C. ROGERS

THURSDAY, JULY 9, 1987

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
Washington, DC.

The subcommittee met, pursuant to notice, at 2:10 p.m., in room SD-406, Dirksen Senate Office Building, Hon. Quentin N. Burdick (chairman of the committee), presiding.

Present. Senators Burdick, Lautenberg, Breaux, Graham, Stafford, Chafee, Simpson, and Symms.

OPENING STATEMENT OF HON. QUENTIN N. BURDICK, U.S. SENATOR FROM THE STATE OF NORTH DAKOTA

Senator BURDICK. The committee will please come to order.

Good afternoon. The full Committee on Environment and Public Works is meeting today to conduct a hearing on the President's nomination of Dr. Kenneth C. Rogers to be a member of the Nuclear Regulatory Commission.

I would like to welcome Dr. Rogers and his wife, Dr. Katharine Rogers, to the hearing. We look forward to hearing from you, Dr. Rogers, today.

I also would like to welcome my colleagues, Senator Lautenberg and Senator Bradley, and my colleague from the House, Congressman Frank Guarini, who will be making a statement in support of Dr. Roger's nomination.

The Nuclear Regulatory Commission has very important responsibilities. The safety of the public depends upon the proper regulation of nuclear power. The future of nuclear power depends upon the public's confidence in the ability of the NRC to properly regulate the nuclear industry.

There are many important issues facing the NRC today. These include ensuring the safe operation of existing nuclear power plants. Another is ensuring that the storage and disposal of nuclear waste will not endanger the public health and safety.

A commissioner must be able to exercise independent and thoughtful judgment on these and other issues. If confirmed, we hope that Dr. Rogers will be able to meet this task with wisdom and integrity.

We look forward to Dr. Rogers' testimony on how he would approach these important responsibilities. This concludes my opening statement.

I now will call on my colleague Senator Stafford.

Senator STAFFORD. Thank you, Mr. Chairman. I have no opening statement. I had the pleasure of meeting the nominee earlier and I look forward to hearing from him.

Senator BURDICK. Senator Breaux, would you like to be heard on this nominee?

OPENING STATEMENT OF HON. JOHN B. BREAUX, U.S. SENATOR FROM THE STATE OF LOUISIANA

Senator BREAUX. If I may just briefly, Mr. Chairman. Thank you very much.

I would join the members and you, Mr. Chairman, in welcoming Dr. Rogers to the committee and also I look forward to hearing his statement and exploring with him some of the issues that confront the Nuclear Regulatory Commission today.

I thought I would note that some opposition to Dr. Rogers confirmation by this committee has recently surfaced. I have been contacted recently, as I believe all members of the committee have, by individuals and some groups that urged me to not vote for his confirmation because he is on the board of directors of a concern that operates nuclear powerplants and because he has openly expressed his support for nuclear power.

I do not believe, however, that these facts are sufficient cause for the rejection of an individual for this position.

I will also state my general belief, Mr. Chairman, that in the normal course of events, the Senate's role in the confirmation of Presidential nominees for executive branch positions should be accorded a certain amount of deference. That is, although a Presidential nominee might not be any particular Senator's choice for that position, the Senate should accord the President some leeway in choosing persons to carry out the administration's policies that are consistent with the law.

Pursuant to that view, I would not personally oppose the nominee unless the nominee was clearly unqualified to hold the office that he is seeking.

Having said that, however, I will also state my belief that a nominee for a position on the Nuclear Regulatory Commission does not quite fit into the category of nominee to which such deference should be accorded.

If the members will bear with me for just one moment and allow me to explain why I believe this to be the case. The NRC is not, in the purest sense, an executive branch agency. It is truly an independent regulatory body that was created in 1974 out of a congressional and executive branch realization that as a civilian nuclear program in this Nation matured, the old Atomic Energy Commission structure was in need of refinement.

Specifically, a decision was made to split, if you will, the promotion and regulatory functions of the AEC. In doing so, the Congress and the executive branches jointly recognized that public confidence in civilian nuclear power in this country depended, in large measure, on the creation of a truly independent body whose sole mission was the regulation of nuclear power and materials in a manner that protects public health and safety and the environment.

This vitally important role of the commission, and its independent nature, was reaffirmed by Presidential and congressional action pursuant to Reorganization Plan Number One of 1980.

Recently, the actions and integrity of the NRC have come under increasing attack in the Congress and the public at large. Indeed the Subcommittee on Nuclear Regulation has, for the past 6 weeks, been conducting and extensive investigation into allegations of commission coziness with the regulated industry.

This member has called for the resignation of one of the sitting commissioners as a result of that investigation. I made clear at that time, that my principal reason for doing so was based upon my conviction that this commissioner has not lived up to the standards of conduct and ethical behavior that we should expect of a commissioner.

I remain convinced that this commissioner does not recognize the proper boundary between an individual who philosophically supports the use of nuclear power and an official with the awesome responsibility to effectively regulate such activity.

I recognize that an examination of this issue is a difficult one. It involves complicated assessments of attitude that, in this scenario, is often very difficult to achieve.

Nevertheless, I believe we owe it to ourselves and the public to attempt to make such an assessment and to not feel compelled to make a rush to judgment.

I will close by saying that my remarks should not indicate that I am opposed to this nomination in any way. I found Dr. Rogers to be very open and forthcoming in the meeting that we had prior to today's hearing.

I did not, however, have an opportunity to fully explore all of my concerns with him at that time. I hope that we would be able to do that at today's hearing.

Thank you, Mr. Chairman.

Senator BURDICK. Senator Lautenberg?

OPENING STATEMENT OF HON. FRANK R. LAUTENBERG, U.S. SENATOR FROM THE STATE OF NEW JERSEY

Senator LAUTENBERG. Thank you, Mr. Chairman. I am pleased to welcome my senior colleague from the State of New Jersey, Senator Bradley, and we expect Congressman Guarini to arrive soon, and I know that they are going to be introducing Dr. Rogers.

Dr. Rogers has brought commitment and energy to his current post as President of Stevens Institute of Technology. We believe that Stevens is one of the finest such institutions in the country and he has served Stevens since 1957, when he joined the institution as a professor.

Dr. Rogers' nomination to the NRC places him face to face with a significant challenge confronting the Nation. That is assuring the safety of nuclear facilities.

Citizens of New Jersey obviously have a strong interest in nuclear safety. Our State has several major nuclear facilities and we get about 20 percent of our power from nuclear plants.

At Chernobyl, the Soviets have evacuated everyone within an 80 mile radius of the plant. In New Jersey, our entire population of 7.5 million people lives within 80 miles of a nuclear station.

The accidents at Chernobyl and Three Mile Island have sharpened public awareness about nuclear safety. People in my State and across the country have taken a close look at the nuclear question,

To reassure the public that these events won't be repeated, we need tough Federal oversight. We need an NRC that is willing to take a hard and objective look at the nuclear industry.

Yet, the independence of the NRC has been questioned recently. The commission is facing serious credibility problems, and this heightens the challenge that Dr. Rogers faces, as a nominee, and those confronting the current commissioners.

The NRC must not only show its ability to regulate the industry, it must restore the public's confidence. It must demonstrate that it is doing its job and through vigilance and tough-minded independence the commission must assure the citizens of this country that they are not at risk.

Acceptance of a nomination to the commission is tantamount to a commitment to address some very significant challenges.

Dr. Rogers has outstanding professional qualifications. He has an outstanding record of public service and I welcome him here today, and I look forward to hearing his perspective on how the NRC and the Nation will meet these challenges.

Thank you, Mr. Chairman.

Senator BURDICK. Senator Symms?

OPENING STATEMENT OF HON. STEVE SYMMS, U.S. SENATOR FROM THE STATE OF IDAHO

Senator SYMMS. Thank you, Mr. Chairman.

I am very pleased to welcome our colleague from New Jersey, and also to welcome Dr. Rogers as a nominee for the Nuclear Regulatory Commission.

As it has been said here, Mr. Rogers' record at Stevens Institute, where he developed an engineering criteria that excellence was the norm rather than the exception in all engineering practices, I think, is a real credit to him, the institution and to the country.

I believe he is very well qualified to fill this position. I want to, if I can, bring up two points at this time because I am afraid I may be called away to another meeting and maybe the Doctor can address them when he makes his statement.

The Nuclear Regulatory Commission has been affiliated with the Idaho National Engineering Laboratory since the commission was formed from the Atomic Energy Commission. This association has benefited Idaho and the Nation.

The nuclear safety research conducted at INL has made major contributions to safe operation of nuclear plants, and it has also helped reduce cost to the rate payer and allowed more reliable power production. In this regard, nuclear research conducted by NRC would seem to have strong support and funding both within and outside the commission.

However, over the past few years, NRC has been severely criticized for its research efforts. I would hope, if Mr. Rogers is aware of it, that he might comment, when he comes to the table, on the National Academy of Sciences that recently took NRC to task, and also what his philosophy is regarding research and how it should play a role in regulation.

Thank you very much.

Senator BURDICK. Senator Simpson.

OPENING STATEMENT OF HON. ALAN K. SIMPSON, U.S. SENATOR FROM THE STATE OF WYOMING

Senator SIMPSON. Thank you, Mr. Chairman.

I have put the full text of my remarks in the record. I have met with Dr. Ken Rogers and I was very impressed. As we consider his nomination, I extend a warm welcome to the other Dr. Rogers, Dr. Katharine Rogers, with a distinguished career in her own right and life, and she joins us in this important step in the confirmation process.

I think it is important that we proceed in view of the fact that the position has been vacant since July 1st. We have only four sitting members.

As I say, you and I have discussed things. I have enjoyed that discussion. You have shared your perspectives with me. It is indeed a time of great challenge.

I can assure you that it is a thankless task, a terribly tough job. Indeed, I have a hunch that shortly after being sworn in, you will be sworn at. That goes with the territory. You have one of the most difficult jobs in this town.

I am still very pleased to see people of your caliber willing to serve your Nation in this capacity and I thank you, sir.

[Senator Simpson's statement follows:]

OPENING STATEMENT OF HON. ALAN K. SIMPSON, U.S. SENATOR FROM THE STATE OF WYOMING

Mr. Chairman, I join with you in welcoming Dr. Ken Rogers here today before the committee, as we consider his nomination by the President to serve as a Commissioner of the Nuclear Regulatory Commission. I also extend a warm welcome to his distinguished wife, Dr. Katharine Rogers, as she joins us for this important step in the confirmation process.

I should also like to thank you, Mr. Chairman, for your commitment to the timely consideration and processing of this nomination, particularly in view of the fact that the position to which Dr. Rogers has been nominated has been vacant since July 1—leaving the Commission currently with only four sitting members.

I have had the opportunity—as many of my colleagues have—to meet personally with Dr. Rogers to discuss with him his interest in this position and to review his qualifications and background. He and I have had a fruitful discussion about the role and responsibility of the Commission in regulating the commercial nuclear power industry, as he shared with me the perspective and expertise that he would bring to bear as one of five members of this collegial body.

Dr. Rogers has been nominated to serve at a time of great challenge for both the Nuclear Regulatory Commission and the industry that it regulates and from all indications, Mr. Chairman, he is well equipped to serve in that capacity. It is a difficult—and sometimes thankless—job. Indeed, I hunch that shortly being "sworn in", Dr. Rogers, you will be "sworn at." But this is perhaps one of the more important and certainly more difficult jobs in town, and I am pleased to see that people of your caliber are willing to serve your Nation. I thank you, Mr. Chairman.

Senator BURDICK. Senator Chafee?

Senator CHAFEE. No thank you. I will disappoint the crowd by saying, I have no statements.

Senator BURDICK. Senator Bradley, we now come to you.

STATEMENT OF HON. BILL BRADLEY, U.S. SENATOR FROM THE STATE OF NEW JERSEY

Senator BRADLEY. Thank you very much, Mr. Chairman.

It is my pleasure to join my colleague, Senator Lautenberg, in introducing Dr. Kenneth Rogers, the President of New Jersey's Stevens Institute of Technology, who is being considered today for appointment as a Commissioner to the Nuclear Regulatory Commission.

Under Dr. Rogers' watchful eye, the Stevens Institute has flourished. His tenure there has been characterized by excellence and vision.

Mr. Chairman, as all members of this committee are well aware, nuclear power has been on trial in the United States since the late 1970's. In the aftermath of the accidents at Three Mile Island and Chernobyl, much of the American public remains skeptical or openly hostile to the sitting and operation of nuclear powerplants. Within the last few months, there have been demonstrations against nuclear power in New Hampshire, Ohio, New York, and California.

At a recent Nuclear Regulatory Commission hearing, a number of Senators and Governors from both political parties testified in opposition to NRC actions which were viewed as weakening emergency planning requirements.

This climate of skepticism is one aspect of the nuclear debate that must be considered along with rising public concern over acid rain, other pollutants and the greenhouse effect.

Clearly, we will need new powerplants, although I remain convinced that energy conservation can put off the inevitable for a number of years. However, without effective oversight to restore public confidence, by which I mean strong and aggressive NRC actions, there will be no nuclear option.

Today, the committee considers the appointment of a new Commissioner to the NRC. As my comments have made clear, I believe this to be a critical decision for the Nation. I am sure the committee will carefully and seriously consider Dr. Rogers for this position.

I can state emphatically that his record in New Jersey is one of quality, and I hope that this committee will conclude that Dr. Rogers' record and his ability qualify him to be a strong defender of the public interest, and thus to hold the position as NRC Commissioner.

Thank you, Mr. Chairman.

Senator BURDICK. At this time, we will introduce a letter from a Member of Congress, Frank Guarini.

[The letter from Congressman Guarini follows:]

FRANK J. GUARINI
8TH DISTRICT
NEW JERSEY

COMMITTEE ON WAYS AND MEANS

SUBCOMMITTEE ON TRADE

SUBCOMMITTEE ON OVERSIGHT

SELECT COMMITTEE ON
NARCOTICS ABUSE AND CONTROL

Congress of the United States
House of Representatives
Washington, DC 20515

HOUSE OFFICE BUILDING
WASHINGTON, DC 20515
(202) 225-2765

15 PATH PLAZA
JERSEY CITY, NJ 07306
(201) 659-7700

426 60TH STREET
WEST NEW YORK, NJ 07093
(201) 868-0325

554 AVENUE C
BAYONNE, NJ 07002
(201) 823-2900

June 22, 1987

The Honorable Quentin Burdick
Chairman
Senate Environment and Public Works Committee
DOB-410
Washington, D.C. 20510

Dear Mr. Chairman:

I would like to take this opportunity to ask for your favorable consideration of Doctor Kenneth Rogers who has been nominated to be the next Commissioner of the Nuclear Regulatory Commission.

Dr. Rogers is currently the president of Stevens Institute of Technology. He obtained this position in 1972 after having served as a member of the faculty since 1957. He has worked to extend many of the fine programs there. Dr. Rogers is a physicist by training and is a strong advocate of strengthening scientific and technological education. He is the author of more than thirty technical papers and is the holder of two U.S. patents. His reputation throughout the academic community is that of someone who is fair, impartial, and objective. I am positive that Dr. Rogers' outstanding educational experience will be a great contribution to the Nuclear Regulatory Commission.

Along with his outstanding academic leadership, Dr. Rogers' is a member in many civic and business community activities on the state and local level. In addition, he has been a trustee of Stevens Institute, Christ Hospital, the Independent College Fund of New Jersey, Association of Independent Colleges and Universities in New Jersey, and the Hoboken Chamber Orchestra. Dr. Rogers is also a member of numerous professional societies.

I am hopeful the Committee on Environment and Public Works will approve Dr. Rogers nomination as Commissioner of the Nuclear Regulatory Commission. I am confident that Dr. Rogers will be a thoughtful and farsighted leader of the Commission that will lead America into the 21st century. His broadbased education and experience ensure that his qualifications are unmatched for this position. I wholeheartedly support Dr. Rogers nomination.

With kindest regards, I remain

Sincerely,

Frank Guarini

FRANK J. GUARINI
Member of Congress

Senator BURDICK. Dr. Rogers, you may proceed in any manner you wish.

STATEMENT OF DR. KENNETH C. ROGERS, NOMINEE TO BE A MEMBER OF THE NUCLEAR REGULATORY COMMISSION

Dr. ROGERS. Mr. Chairman and members of the committee, it is a great honor to appear before you today as President Reagan's nominee to be a member of the U.S. Nuclear Regulatory Commission.

Members of the Commission are charged with the enormous responsibility of ensuring that the use of nuclear materials and particularly the operation of nuclear powerplants in our Nation are carried out only in ways that protect the health and safety of the public.

I understand that responsibility and appreciate the diligence and professionalism which it demands. I strongly believe that nuclear power can be used safely to help meet our Nation's needs for electrical energy.

However, there is a great deal of skepticism in the American public as to whether nuclear power is in fact now being safely used and whether in the future it should be used at all.

Affirmative answers to those questions will have to come as a result of clear demonstrations to the public over time of consistently safe performance by those who operate the nuclear plants and by concerned, diligent and responsible oversight by the Nuclear Regulatory Commission.

I believe that my 30 years of experience in scientific research, in educating professional scientists and engineers, in managing a demanding high quality technological institution, and in overseeing several organizations chartered to serve public needs all have given me experience which could be called upon and be of great value in discharging the responsibilities of a Nuclear Regulatory Commission Commissioner.

As an educator of professional scientists, I have continuously emphasized the importance of doing everything precisely and subjecting every finding to the highest standards of scientific verification.

As a leader of an institution concerned with the education of engineers, I have repeatedly stressed the critical importance of addressing the humanistic and ethical aspects of a problem and the importance of satisfying those requirements as well as the technological ones in any proposed solution.

For the past 15 years I have been the president of one of our country's first colleges of engineering, the Stevens Institute of Technology. The president of Stevens has traditionally served on the board of directors of a New Jersey bank, a hospital, and a public utility, and I, too, have had the benefits of that experience and have tried to bring to those boards an independent, more academic and, therefore, at times, more questioning point of view that I believe has ultimately improved those organizations.

Through my membership on the board of a public utility which operates several nuclear powerplants, I have gained valuable insights into day-by-day workings of nuclear plants and how and where potential problems can arise.

I have been a member of an external oversight committee to carefully examine and criticize all of the safety aspects of that corporation's nuclear operations and have never hesitated to call for immediate corrective action whenever there were any indications of a problem with safety implications.

In relations with industry, I am committed to the position that the NRC is an independent regulatory agency that must render its decisions on the basis of a publicly open record. The NRC must continually monitor the performance of its licensees and demand that the highest possible standards of safety are being met, and that even higher possibilities are being pursued.

It must promptly and vigorously enforce its regulations, which must themselves be established on the very best professionally recognized technical and factual basis. There must be continuing communication between industry and the NRC on safety matters.

It is important that the expanding base of practical experience and accumulated technical knowledge in industry be available and communicated to the NRC, and that there be ongoing cooperation between the NRC and industry in the promotion of safety and the protection of the environment.

However, as a regulatory agency whose credibility with the public is vital, the NRC must maintain a distinct, perceptible distance from industry and a totally professional posture that recognizes that distance.

This is no simple matter to achieve credibly, but a truly superior and safe nuclear industry requires effective professional communications between the industry and the regulating agencies which oversee it.

In its relations with industry, the NRC must encourage excellence in safe performance and cooperate with industry in the achievement of that objective. Communication does not imply the relaxation of vigilance or the weakening of oversight or vigorous enforcement.

The NRC's central responsibility is to regulate the commercial use of nuclear energy so as to protect the environment and the health and safety of the public. It is very important that in discharging that responsibility, the Commission does so in a manner of openness and candor that clearly demonstrates to the public and its elected representatives that the Commission's priorities and actions are assiduously directed to the successful fulfillment of that mission in an unbiased and firm manner.

The Commission must keep the public informed of its actions and must provide ample opportunity for public expression of opinion and concern. The Commission must bring to bear the very best professional expertise and judgments on all matters which come before it and must conduct public hearings and inform the public of the basis for all of its decisions and actions.

The Commission must be attentive and responsive to the elected representatives of the public and it must scrupulously follow all applicable laws such as the Sunshine and Environmental Acts, but at the same time it must also exercise fully its own responsibility for decisionmaking and action based upon its findings of fact and established knowledge, and its best professional judgment.

It is important that the Commission both act, and be perceived by the public to act, according to the highest standards of professional service to our nation.

If confirmed, I pledge my total commitment to achieving that objective.

Mr. Chairman, thank you.

Senator BURDICK. Dr. Rogers, do you know of any matters which you may not have thus far disclosed, which might place you in any conflict of interest if you are confirmed in this position?

Dr. ROGERS. No, I do not.

Senator BURDICK. Are you prepared, at the request of any duly constituted committee of the Congress, to appear in front of it as a witness?

Dr. ROGERS. Yes, I am.

Senator BURDICK. Do you believe that cost should be a factor in determining whether to impose or enforce safety requirements?

Dr. ROGERS. No, I do not.

Senator BURDICK. Do you support public participation in the NRC decisions with respect to both the licensing process and government in the sunshine?

Dr. ROGERS. Yes, I do.

Senator BURDICK. Senator Stafford.

Senator STAFFORD. Thank you, Mr. Chairman.

I think, coming from Vermont, Dr. Rogers, on your brief and pithy answers, I will give you the Calvin Coolidge Award of the day.

I do note, in your testimony, traditionally, I guess, for the president of Stevens Institute, you served and maybe are serving on the board of a public utility that operates nuclear powerplants.

Assuming that you are confirmed in this responsibility, what would your intention be as far as further service on such a board is concerned?

Dr. ROGERS. I would immediately resign my membership on the board of Public Service Electric and Gas, Public Service Enterprise Group, which is the holding corporation of which that is a part, and any connection whatsoever with that entity.

Senator STAFFORD. I would assume, as to any issues which might develop with respect to your service on the board of a utility with nuclear powerplants that you would recuse yourself as a member of the NRC from acting on that particular item.

Dr. ROGERS. Anything that involved that particular corporation, yes, sir, for a period of 2 years is what I have understood is the appropriate time, and I am certainly prepared to do that.

Senator STAFFORD. Based on your observation, while you have so served, as to the nuclear powerplants, do you have any feeling for the level of safety required by and achieved by the nuclear powerplants in this country, and I assume you would have to limit your answer to those that you have actually observed?

Dr. ROGERS. Yes. I believe that it is possible, and I believe that I have seen evidence for, a steady improvement in the safe operations of the three nuclear plants that I have watched under public service's control.

I believe that a steady improvement in safe operation can be achieved. I believe there is very good evidence for that in that par-

ticular situation. I am very much encouraged by the fact that steady progress can be made. That is not to say that perfection has been reached yet.

However, I think the objective of continued, steady improvement based upon excellent management, careful attention to detail, the accumulation of knowledge, which is constantly developing, can all contribute to a steady improvement in the expectations for safe operations.

Senator STAFFORD. Thank you.

The Governor of my State, and some other Governors may have the same feeling, is of the opinion that the State ought to have a greater role in determining questions of safety with regard to a nuclear powerplant within its borders. Would you have any comment on that particular aspect of the problem?

Dr. ROGERS. I would imagine that recommendations for improvement in anything relating to safety should be acceptable and welcomed by the NRC from whatever direction they come. If that involves a State agency in which the utility is located, I think that that it is perfectly appropriate to be receptive and open to those recommendations.

Senator STAFFORD. Thank you, Doctor.

Thank you, Mr. Chairman.

Senator BURDICK. I failed to mention it but we would like to have the questioning limited to 5 minutes on the first round.

Senator STAFFORD. I think that we stayed within the 5 minutes.

Senator BURDICK. Senator Lautenberg.

Senator LAUTENBERG. Thank you very much, Mr. Chairman. Our distinguished former chairman of the Environment Committee from Vermont knows very well how short and pithy New Jersey people usually are in their comments.

Welcome again, Dr. Rogers.

There are a couple of things that are going to be of concern, and you have touched on them, they have been reflected in a couple of questions that you have been asked.

The problem that is raised, obviously, is what kind of a bias, if any, what kind of a conflict, if any, might there be with your interest in and your support of the facilities that PSG&E have, your interest in that company, a fine company, one that has, I guess, by far the major share of the generating power in the State of New Jersey.

How many customers does PSE&G serve, do you know?

Dr. ROGERS. It is several hundreds of thousands, certainly.

Senator LAUTENBERG. It is the largest by far.

Dr. ROGERS. Yes.

Senator LAUTENBERG. The questions concern potential conflicts. How do you see yourself freeing your thinking from going back to being an active and, appropriately, aggressive supporter of the company, its policies, its generating structure, nuclear facilities, and being able to sit here with an objective view, protecting the public?

Do you see a problem there? What do you do to free your mind from some views that you might have held as a board member of the company?

Dr. ROGERS. I have tried to touch a little bit on that question in my opening statement in the sense that I felt that my membership on that board was to bring an outsider's point of view to the deliberations of that board, which is sometimes at odds with that of the management of a corporation.

That is why a board is sometimes composed of people with totally different backgrounds, to bring to the deliberations of the board a point of view which is not necessarily the traditional one of that particular industry or the management of that industry. I have made efforts to play that kind of a role on the board of public service.

Obviously, I have been on that board for some time, and I know something about the people, and so on and so forth, but I have never hesitated to raise objections, to be in opposition to other board members or management if I felt that that was required for that particular company.

I think that in a broad responsibility, I would be capable of taking the same kind of distance from that particular corporation in a more extended way than I would have as a member of the board in looking at the long-term requirements that the corporation might satisfy.

Public Service is a public utility, it has not only obligations to its shareholders, it has a more broad obligation to the region and the citizens which it serves. I think that in membership on that board, I have tried to bring that point of view from time to time to its deliberations, and distanced myself, wherever necessary, from the purely financial and economic interests of the corporation.

I would see in this broader responsibility, one which is at a higher level, a requirement to distance one's self from the particular corporation that one might know something about. I would say that I do not see that as a philosophical problem that I personally would have.

I have been, in my own view, always an independent agent on every board or organization of which I have been a member. I am not a member of the herd. I very much value my own independence, and I feel that in discharging responsibilities of a commissioner that it would be philosophically a very easy challenge for me to take on. I do not see that as a severe problem.

This is, of course, my own personal assessment, and time will have to dictate whether that is achieved or not, but I do not see a philosophical problem.

Senator LAUTENBERG. Let me ask you this. You said that on occasion you have had a differing with the other members of the board, I think was the expression you used, with the policy of the company—Let me not extend your comments. But, for example, what kind of decisions do you think that you might have either challenged, opposed, or changed as a result of your particular experience, and your knowledge?

I would assume that you are uniquely qualified professionally as a board member. The outside board members, many of whom I know are not traditionally academics. What kind of conflicts, or what kind of discussions or problems did you run into that you feel that you injected an objective or neutral point of view?

Dr. ROGERS. I will try to stay away from very specific internal matters, the detailed nature of which is probably not appropriate to discuss here. For example, I took a very strong position that the leadership of that company should be highly qualified technically to manage a corporation with a major commitment to the use of nuclear energy.

At the time that a new chief executive officer was to be sought and appointed, I took a very strong position that a highly qualified and experienced person in a nuclear capacity be the kind of person that was selected to lead that company instead of, perhaps, a person with a strong financial background. That was quite a different point of view from that which the board held when I first came on it some years earlier.

I have also taken positions, not necessarily in opposition to other board members, but certainly in terms of relative priorities, as a member of the Nuclear Oversight Committee of Public Service, for the application of significant additional resources to see that there were improvements made that really were meaningful in the safety aspects of all of its operations.

I think that I have played that kind of a role in a number of different ways.

Senator LAUTENBERG. Thank you very much, Dr. Rogers. My time is up.

Thank you, Mr. Chairman.

Senator BURDICK. Senator Breaux.

Senator BREAUX. Thank you very much, Mr. Chairman.

Dr. Rogers, let me first sincerely congratulate you on your willingness to serve in this capacity. I know that you are not doing it because of the great salary on the commission, you do it at a personal sacrifice. You also lay your personal life to a large extent on the table, it has to be treated as an open book. I commend you for your willingness to do that.

It is difficult to get good people to make the sacrifice to serve in public, and we need more individuals who are willing to do that. We had a FAA Administrator nominee before the Commerce Committee the day before yesterday, and again it is the same example of trying to find good private citizens who are willing to serve their government.

I note in your statement, trying to get a philosophy of how you approach this job, you talk about "the NRC must continually monitor the performance of the licensees," that you must "promptly, and vigorously enforce the regulations of the NRC," and that you must "communicate with the industry. There must be on-going cooperation between the industry and the NRC," and you must encourage excellence.

What is your opinion as to how these things are to be done, specifically with regard to enforcement of regulations, how are regulations to be enforced after a licensee is a licensee?

Dr. ROGERS. First there must be a mechanism for monitoring operations. There has to be a way of continually examining the quality of performance. There are many specific indicators that are useful in that regard, and some of them are fairly technical, but they must be examined very carefully, followed very carefully, to

look at their absolute value in a certain sense, and their trends. Are they going up, or are they going down?

I will take a small example and say, the backlog of a certain class of work orders that have to be tended to, what are they? Are they safety related? How important are they? When will they be done? Is that trend going up or going down in that particular situation?

Senator BREAUX. OK, let's skip that point and assume that the excellent monitoring system that we have in place shows that the licensee is basically fouling up.

Dr. ROGERS. Yes.

Senator BREAUX. What is your opinion as to how that should be addressed?

Dr. ROGERS. I think that it has to be done—first, it must be made very obvious that there is a problem.

Senator BREAUX. That is a given.

Dr. ROGERS. It is a given. I would say that there must be an immediate request for a program, a plan with specific objectives, and times and dates, to correct that specific deficiency. There is a wide range of possibilities.

If the deficiency is so immediate that there is an immediate danger to the health and safety of the public, then I would not hesitate to recommend, or to vote to recommend that the plant be shut down until that was corrected, and that there were assurances that it would not be operating again until that corrective action could be sustained.

There might be intermediate situations where there is the potential for developing an unsafe condition, then there must be an anticipation that that condition will be corrected before the likelihood of an incident of any kind would develop.

I think that there must be a very systematic watching of performance, a systematic assessment of performance, and a way of dealing with a deficiency.

Senator BREAUX. Let me ask you some specifics on actions taken recently, at least I am finding out for the first time, with regard to NRC in some of these areas.

The Commission staff proposed a rule dealing with worker training and certification, but the Commission overruled that staff recommendation and instead issued a policy statement. In the Federal Register, the Commission proposed a rule for worker fitness for duty, basically dealing with drug and alcohol abuse. Because of industry complaints, the Commission withdrew that rule, and made a policy statement. Additionally, they are now working on a policy statement, as opposed to a rule, with regard to maintenance procedures.

My question to you is: What is your view in these areas? Is a policy statement sufficient, or are these areas important enough to be covered by specific rules published by the Commission?

Dr. ROGERS. I think that they are very important. I do not think that a policy statement by itself is enough. I would hope that the Commission could approach each of these problems separately and examine them separately to see that is the best way to proceed, but my feeling is that there must—it might be appropriate to have a

policy statement instead of a rule, but then there must be measures of compliants with that policy statement.

I think that they can be worked out, or at least it should be attempted to work them out on a case by case basis with the individual licensee because there are regional differences in how it might be sensible to actually solve a particular problem, but a solution must be submitted, in my opinion, by the license, and approved by the NRC, and ways of monitoring that, all part of the procedure.

This is distinct from an absolute prescription, as to what must be done, issued by the NRC. It more relates to a policy issued by the NRC, some flexibility in how to meet that policy offered to the licensee, but the licensee has to come up with a specific way, of carrying it out, and specific ways that are acceptable to the NRC, of actually monitoring the licensee's performance on its own stated procedures.

Senator BREAUX. Give me a comment, please, on enforcement of those rules. Assuming that you prefer rules with regard to maintenance procedures of licensees, when those maintenance procedures are not followed. It is clearly established that if you have rules saying that such and such must be done at such and such intervals—the oil must be changed, the bearings must be changed, whatever makes the plant, as designed by the engineer, work properly.

The rules are established, and then that company is shown to clearly violate those procedural rules with regard to maintenance, what is your recommendation with regard to enforcement of those rules? Would you favor penalties, if they do not follow the rules as proposed by NRC?

Dr. ROGERS. Yes, I would.

Senator BREAUX. OK.

I don't know how much time I have left. Somebody bang the gavel, if I am over.

Senator SIMPSON. I am banging the gavel.

Senator BREAUX. Let me bang the gavel. My minority ranking member banged the gavel. I yield my time.

Senator BURDICK. Senator Simpson.

Senator SIMPSON. Mr. Chairman, I thank you.

You will be dealing a great deal with the new chairman of the subcommittee here, Senator Breaux, who is a very, very able and sensitive man to these areas. It has been a great pleasure to serve as his ranking member, as it is to serve with the chairman of the full committee.

You are going to get into a very contentious issue right off the bat, one of the most contentious and polarized issues now facing the Commission, and it is this issue of the emergency planning, and the hostage plant issue, forget all the other romance, you are going to get thrown right into this one.

Shoreham just sits there, $4.5 billion worth of powerplant, 5 percent low power license. Democrats and Republicans in that area of the world just destroy themselves seeing who can keep it closed. It is really a fascinating adventure, and you will be right in the middle of that. Meanwhile, given a good hot summer up there, already a critical area of power, it will be interesting to see how that changes with 95 degree weather and 95 percent humidity, when

they begin to shutoff some of the power. That is where they are headed in that situation because it is at 5 percent low power.

Seabrook, another marvelous political issue. Democrats and Republicans alike thrashing around in that one. They are ready for lower power licensing there, but they have not done the emergency planning, it was never intended. When I was chairman and Senator Hart was ranking member, we worked very hard, along with Democrats and Republicans on both sides of the aisle, on the NRC authorization in 1980, to set up emergency planning—if the State wouldn't do it, and the country wouldn't do it, we would have the utility do it under very careful guidelines. We couldn't get that done.

It is a good way to hold the plants hostage, and it is a marvelous, and yet sad thing to watch.

We have 107 of these things on stream in America, that is reality, and there is another dozen that are going to come on stream that have already been approved and are coming into the final stages of final operation. You would think that there are people in America that do not understand that. But we do have those, and they are there.

I have reviewed your response to Senator Humphrey's questions on the subject of emergency planning. He feels very strongly about that. I found those answers to be rather thoughtful and reasonable. I don't expect you to form an opinion on this tough issue, particularly before reviewing this very extensive rulemaking that is on in the NRC right now.

Let me ask you this. Will you, prior to making any decision on this issue, make every single effort to review in a very thorough manner the relevant legislative history. Forget all the hype and the hurrah and the hysteria, and look at what the Senate and the House were doing.

Review in a thoughtful manner the relevant legislation, the legislative history on the subject of emergency planning, the utility plan, and endeavor to ensure that whatever action you finally take is going to be consistent with a very objective and complete analysis of that legislative history.

Dr. ROGERS. I can give you my assurance, Senator, that I will do exactly that, and I will certainly attempt to do that in every issue that has a history that comes before the commission.

Senator SIMPSON. I think that that is very important.

You are going to go on a commission which is called a collegial commission, except that they don't college. In fact, they can't college because every time they are gathered together there is some violation of the Sunshine Act. Maybe two can gather together in the hall with a coffee cup, although that is dangerous too, but certainly three cannot.

I don't think that this is what the American people think of when they think of a collegial body. They think that the five of you sit down and kick your shoes off, and talk about the health and safety of the people of the United States who are involved, the efficiency, and the effectiveness of these utilities. You can't do that. It is going to be very frustrating for you. You will find that is true.

Dr. ROGERS. Yes.

Senator SIMPSON. How are you going to handle all of that?

Dr. ROGERS. I believe that one on one is not prohibited, and I certainly will try to discuss things with my other Commissioners one at a time. I believe that the full benefits of collegiality may not be available because of the limitations of the Sunshine Act, but I am not sure that there aren't valuable aspects of collegiality that can come through the Commission structure.

I believe that through an effort to bring out, if it finally takes place, in the open sessions that are open to the public that involve all the Commissioners, I would try to use those before coming to a decision to exchange information. I have operated in the past on commissions in New Jersey that are subject to a New Jersey Sunshine Law, and I have not been uncomfortable about speaking my mind, or even changing it, if necessary, in public.

I think that it is more difficult than the ideal, but there are still virtues that can come forth because there is a multiplicity of professional points of view that are brought to the final decision on an action.

Senator SIMPSON. Doctor, I hope that you will always express those, and that will be very important, because we need that diversity of thought as we conduct our oversight over the Nuclear Regulatory Commission. Good luck. I wish you the very best.

Dr. ROGERS. Thank you, sir.

Senator BURDICK. Senator Graham.

Senator GRAHAM. Thank you, Mr. Chairman. I apologize for my late arrival, and if I ask a question that has previously been submitted, I apologize and I will review the record.

I have had a long time interest in the issue of disposal of nuclear waste, both low and high level. What thoughts do you have on the current system of attempting to arrive at a site for waste disposal and recommendations as to how that process might be more refined and capable of reaching a conclusion?

Dr. ROGERS. Senator, I have to say that I have not had an opportunity to review all of the thinking that has gone on so far into solving this very complex problem. I clearly feel, as we all do, that the solution of that problem is fundamental to the long-term viability of a nuclear powerplant system in the United States.

We must find an acceptable way of protecting the public from the residual waste from such operations. But I do not have a solution, a ready-made solution, and I am not fully conversant with the thinking and debate that has taken place.

I understand the complexities of the problem from a public policy, from a number of different points of view, and I would hope and commit myself, if confirmed in my role as a Commissioner, to acquaint myself with all of those issues, and to try to bring to bear on them the best professional judgment that I can. But I do not feel that I am prepared to comment on the qualities of any of the proposed solutions that have been made to date, but would be prepared, with an open mind, to approach them or any other solutions that might be offered.

Senator GRAHAM. Within your professional knowledge, are there any other places in the world that are dealing with this issue that might be a model that we could look to for some answers?

Dr. ROGERS. I am not aware of any just at the moment that would be clearly the model for the United States to adopt. Many of

the other countries that are using nuclear power don't have quite as long a history of it, and their waste disposal problems may not be as acute at this time as our own are approaching.

It is hard for me to say, and I must confess that I am not an expert in this area. It is one that has not been an immediate problem to the corporation that I have had experience with. Although it is very clear that a solution to that problem has to be found, they have not been directly involved with trying to find such a solution. It has been somewhat outside of my own experience to date.

Senator GRAHAM. Thank you, sir.

Senator BURDICK. Senator Lautenberg.

Senator LAUTENBERG. Thank you, Mr. Chairman.

Just a couple of things, Dr. Rogers. Since you do sit on the utility board, let me ask you your opinion about management accountability. If there is a significant violation at a plant, should the CEO of the company be held accountable?

A big company, widespread operations, is the top executive liable in your view for violations that are made by the company?

Dr. ROGERS. I believe the chief executive officer of any corporation ultimately must bear responsibility for any significant deficiency in the operations of the company. Even if it is a large, multipurpose holding company, if he is the chief executive officer, he must have a responsibility.

It may not be that he is the only one who must be held accountable, but he or she certainly must be held accountable. It cannot be escaped. I believe that it is terribly important that that be made very clear, that the responsibility cannot be avoided by any corporation and passed very far down the chain.

Senator LAUTENBERG. We are talking about a CEO who may be several management layers removed from the specific function in question, but you do feel, I take it from your answer, that the buck stops there.

Should the CEO pay with his job, if it is a serious violation of safety procedure, a violation of contract that deals with the safety question. I am not talking about shareholder earnings or things of that nature, I am talking about the safety questions, should he pay?

Dr. ROGERS. A serious violation, which endangers a significant number of people, I would say that the CEO has to be held responsible for that.

Senator LAUTENBERG. In terms of the NRC, you have had a chance to look at how it functions. You have had a chance to see how this Commission operates. How do you think they could beef up their public participation? Have you looked at it closely enough to have an opinion about that?

Dr. ROGERS. No, not in detail, but I believe that communication with the public could certainly be improved.

Senator LAUTENBERG. What about input from the public: (a) would that be of value; (b) how would you facilitate it?

Dr. ROGERS. I really don't have a formula for facilitating, but I think that it is extremely important. The use of nuclear energy in this country is a matter of concern to every citizen. It can affect every citizen in some way. The Nuclear Regulatory Commission must provide for mechanisms to hear the concerns of the public,

and communicate back to the public in toto how it is responding to those concerns.

There is always the problem that a great concern can be expressed by a relatively small number of people, so it is a professional judgment that ultimately must be rendered as to how to balance the response to all of those concerns. I do not feel that any group of citizens that wishes to make its concerns heard should not have an opportunity to do so.

Senator LAUTENBERG. What are the couple of things that you would see as priorities for the NRC in the years immediately ahead?

Dr. ROGERS. I think that the whole industry has been turning from an initiation and construction activity to a set of operating activities. Most of the plants that are projected to exist within the next decade or so are in place.

We have something like 108, or thereabouts, operating now, with a projection of perhaps 110 or 112 in the immediate future, and beyond that there don't seem to be any other prospects on the horizon at this time. So that the immediate concern must be with the safe operation of all those plants that are presently on line, and the new ones that come on line.

In my view, the major responsibility and attention has to go to improving all of the safety aspects of everything that is currently in existence in the nuclear plant area.

Senator LAUTENBERG. Do you see the NRC taking a more active role in oversight of nuclear facilities? Would you prefer that? Would you recommend that?

Dr. ROGERS. I don't know what that really means, Senator, in detail. I think that the question was raised a little bit earlier by Senator Symms about research, and he hoped that I would say something about research.

I think that this is an appropriate point to interject the notion that research on all questions relating to the technical operations of nuclear plants must constantly be pursued to refine our knowledge and understanding of every single aspect of those very complex systems.

I think that it is very important that there be an on-going research program to look into every assumption, into every engineering design basis of a generic type that could influence the safety of presently operating plants. Because a plant was designed, built, and licensed 10 or 15 years in the past is no reason to believe that all the assumptions that were built into that original design are still as valid as we would hope them to be today if we were approaching that same problem.

I believe that there is a necessity for an on-going research program to support the oversight function of the NRC. Indeed, the emphasis must be on safe operations.

Senator LAUTENBERG. So you would support an active role for the NRC in oversight of nuclear facilities as they presently stand, leaving aside the research thing, their operation, their efficiency, their likelihood of problems. You would support NRC's role in that.

Dr. ROGERS. Yes, I would.

Senator LAUTENBERG. Thank you very much, Dr. Rogers.

Thank you, Mr. Chairman.

Senator BURDICK. Senator Breaux.

Senator BREAUX. Thank you, Mr. Chairman.

Dr. Rogers, I had asked you a question which was sort of a hypothetical in which I said that we had rules in place for maintenance procedures, I asked would you support penalties for violations of those rules regarding maintenance, and you said yes.

Let me ask you specifically, if I may, in dealing with worker training and certification of those workers, and in the area of determining worker fitness for duty, which basically involves making sure that there is no drugs or alcohol abuse.

Dr. ROGERS. Yes, sir.

Senator BREAUX. In the areas of maintenance on existing powerplants, would you support rules and regulations from the NRC which set out the standards for those operations to be performed in an orderly fashion, with penalties if they are found to be in violation of those rules and regulations?

Dr. ROGERS. The way I would put it would be that I would like to see individual licensees have an opportunity to suggest the best way to approach each of those particular problems from an operational point of view, and that the NRC approve or disapprove of those approaches, and approve or disapprove of specific objectives to be reached by those approaches. Then to hold the particular licensee accountable, including fines and penalties when those are not met.

Senator BREAUX. Once the NRC, the utilities, and the manufacturers get together and determine what is appropriate, what are your thoughts on the NRC, as the regulatory agency, at that time, publishing regulations and rules spelling that out and saying: Here are what the standards are. These are our rules and regulations. If you violate those rules and regulations, you are going to go into the penalty box. There is going to be a penalty. It is going to be a fine ranging from zero dollars all the way up to whatever is determined to be appropriate.

Dr. ROGERS. The only problem that I have with that description is the word publication, because it is implies that there is just one single way or one single procedure that would apply totally across the board.

What I am suggesting that I would prefer to consider—I have not dealt with this in a way that would solve the problem, but I would prefer to consider that there be some flexibility so that it is not necessarily done exactly the same way in each different situation. It might be different for a corporation on the east coast from one in the Midwest or one in the Northwest.

For instance, in the drug free rule, the objective is that there should be no impaired individual operating a nuclear powerplant.

Senator BREAUX. I understand that. What I am saying is the FAA, as an example, which regulates aviation, develops a set of maintenance procedures that they develop meeting with Boeing, the manufacturer of the airplane, and meeting with United Airlines who is going to run that airplane. They all get together and they come up with a set of rules and regulations. The maintenance rules for United Airlines are over 100 pages, for example.

Dr. ROGERS. Yes.

Senator BREAUX. The FAA, then, takes that set of proposed rules and makes their rules and regulations. They say: All right, here they are. If you violate them, here is what the penalties are going to be.

My question to you is: Do you favor that type of a process for the NRC, establishing standards in these various areas?

Dr. ROGERS. Yes, I do.

Senator BREAUX. Let me ask one other question on a problem that is facing us right now, and I am wondering if you have any thoughts on it.

It has been suggested by a number of Members of the Senate and the House, both, with regard to how investigations are handled. We have within the NRC now the Office of Inspector and Auditor, which is supposed to look at internal problems, wrongdoings within the NRC.

Some have suggested that that be really made an outside entity. If you are going to have a fair review of possible wrongdoings from within the organization, it should be done from without. What are your thoughts on that?

Dr. ROGERS. I really don't have a strong feeling on that. I would certainly be prepared to live with however that came out.

The concern that I have had, and what I have heard about some of the proposals, involves more the relationship of the NRC and its licensees and their wrongdoings. There, it seems to me, there has to be a very close association between the NRC and its confidence in its licensees, that they are carrying out in an honest and lawful way their obligations. I see a direct impact on the Office of Investigations, that relates to the licensees of the role of the NRC in carrying out its licensee oversight capacity.

With respect to questions involving wrongdoing within the NRC itself, I do not have a strong opinion, except that some kind of oversight has to be exercised on us all.

Senator BREAUX. Thank you for the answer.

My final point is a hypothetical, but it is not so hypothetical, when you hear the facts.

Suppose you are an NRC Commissioner, documents from your office are found in a utility company's office, and no one seems to know how they got there. You are then faced with the question from Congress as to how did they get there. In your role as an NRC Commissioner, how would you handle that situation?

Would you say, I will look at it, and I will tell you what happened, or do you ask the Office of Inspector and Auditor to take over and determine what happened in that situation?

Dr. ROGERS. I would ask for an external review.

Senator BREAUX. Thank you.

Thank you, Mr. Chairman.

Senator BURDICK. Senator Chafee.

Senator CHAFEE. Thank you, Mr. Chairman, and I want to thank Senator Graham, because I think that he is really ahead of me. I am just going to ask just a couple of brief questions.

First, Mr. Rogers, I want to say, just to provide the setting here, I am not a supporter of nuclear power, particularly because of concerns about the proper disposal of the waste. Never mind that, the Congress of the United States has not forbad nuclear power in this

country. As a matter of fact, we have set up procedures for nuclear power and nuclear powerplants.

Accepting that, what bothers me is that corporations have built—indeed, individuals and taxpayers, because it is their money, not tax money but their individual savings that have gone into these plants—at massive cost, and the plants have never been allowed to function because of what seems to me to be two things: One, a shifting target as far as approval of these plants; and, second, because of constant objections of those locally who say that the plant should not be approved for various reasons that have not been taken into account.

It seems to me that the NRC has to look at the overall situation, and have the courage to say, if it is proper to operate the plant. I have a feeling that there is a total bias in the NRC, or at least they have been so beset upon that they lack the courage to give the approval to go ahead on full stream at these plants.

What is your attitude? Are you prepared, if the safety requirements are met, and if there seems to be a host of objections, that could well be considered superfluous, to overrule those objections and go ahead and permit the plant to be operated? It is hypothetical, I know.

Dr. ROGERS. I will try to avoid anything that relates to a particular situation that must be decided by the NRC, because I think it inappropriate for me to come to a conclusion on a specific case.

Senator CHAFEE. I will accept that.

Dr. ROGERS. I believe that if the NRC has assured itself that all of the legal requirements have been satisfied, and that it feels confident that the public safety would not be endangered by the operation of a nuclear plant, then I think that it should issue the license to operate that nuclear plant, and I would be prepared to do so.

Senator CHAFEE. It seems to me only fair for such to take place. I have the feeling, and I must confess that I am not on the subcommittee of this committee that deals with it. Others here are more familiar with these items than I am. But I have the impression that the Commission has become cowed by congressional objections so that it no longer seems to have the courage to act.

That may be an unfair characterization. As I said, I am not for nuclear power anyway, but if we are not going to ban it, which we are not apparently, then those who make their investments based upon the law as they see it, should be permitted to realize the fruits of their investment. Plus there is going to come a time when we are going to need that power since the investments have been made there, rather than in alternate ways that might have been more acceptable to me. But forget that, that was not the way that the decision was made.

So I would hope that you, as a member of the Commission would be prepared to make those tough decisions, and if you found that the criteria have been met, to go ahead, and not feel cowed by objections that constantly pour forth from critics in Congress. It is a bit of free advice which is probably worth exactly what you paid for it.

Dr. ROGERS. Thank you very much, sir.

Senator CHAFEE. Thank you, Mr. Chairman.

Senator BURDICK. Senator Graham.

Senator GRAHAM. Thank you, Mr. Chairman.

From my previous experience at the State level, it seems to me that there was a clear and reasonable allocation, or at least potential allocation of responsibility as between the States and the Federal Government in this subject area, with the States having primary responsibility for site approval, including safety and other relevant considerations, approval, which in the ideal case would be granted well in advance of the date on which construction would start, so that persons would be aware of this potential plant location and could take that into account in their judgments.

The Federal responsibility is for the facility construction and operation, and the primary rationale of that strong Federal role is the ability to utilize the experience of other plants in new situations.

It seems to me that we have had such an erratic pattern of nuclear plant construction and operation. Our State has had a generally positive one. It is not perfect, but plants like the new one at Hutchinson Island was built on schedule, within budget, and has operated at a generally high level of efficiency.

I have wondered why the commission has not attempted to build on these examples of success and encourage a greater degree of standardization of construction and operation so that we are not constantly dealing with a new creation, but rather taking success stories and adding incremental enhancements to them.

This brings me to my question. What would be your position as a Commissioner in terms of encouraging a greater degree of standardization and building on accumulated knowledge?

Dr. ROGERS. I am very fundamentally in agreement with that whole approach. I think that what we need to do is learn how to do everything we are doing much better, rather than necessarily to adopt totally new approaches and new technical situations.

I am not opposed to research or corrective action, but I am very much in favor of the notion that we limit the possible differences between reactors so that we can learn as much as we can possibly learn from those that we operate. That we exchange that information very freely, and that it be part of the overall system, so that we are gradually advancing upward on a learning curve in every single way, so that everything we do is constantly being tuned, fine-tuned, and honed for greater and greater safety of operations.

Therefore, standardization is an important beginning on that whole process. It is fundamental to my own philosophy and point of view here that that is exactly what the future has to hold for the way in which nuclear power is exercised in this country.

Senator GRAHAM. Thank you.

Thank you, Mr. Chairman.

Senator BURDICK. Are there any further questions from the committee?

(No response.)

Senator BURDICK. Thank you, Dr. Rogers, for your appearance today. The committee will review your testimony and your responses to any written questions from members. We then will meet to consider whether to favorably report your nomination to the full Senate.

Dr. ROGERS. Thank you very much, Mr. Chairman, and thank you all, Senators.

Senator BURDICK. At this time, I would like to introduce a letter from Senator Humphrey to Dr. Rogers, and Dr. Rogers' response, without objection.

[The letter and response follow:]

GORDON J. HUMPHREY
NEW HAMPSHIRE

531 HART SENATE OFFICE BUILDING
(202) 224-2841
NEW HAMPSHIRE TOLL FREE NUMBER
1-800-582-3710

United States Senate

WASHINGTON, DC 20510

June 29, 1987

COMMITTEES
ARMED SERVICES
JUDICIARY
LABOR AND HUMAN RESOURCES

Dr. Kenneth Rogers, President
Stevens Institute of Technology
Castle Point
Hoboken, New Jersey 07030

Dear Dr. Rogers:

Thank you for meeting with me during your recent trip to Washington.

As you know, I am deeply concerned with the Nuclear Regulatory Commission's policy towards emergency planning for nuclear power plants. Thus, I would like to understand clearly your views on this issue. Specifically, I request your response to the following questions regarding emergency planning and the proposed change in the Commission's existing emergency planning rule and other relevant matters:

1) Do you consider offsite emergency planning an essential component of overall nuclear power plant safety independent of engineered design plant features?

2) How important is offsite emergency planning in assuring the adequate protection of the health and safety of the public in relation to the protection afforded by plant design safety features?

3) Under current regulations, the Commission cannot issue an operating license until it makes a finding that "there is reasonable assurance that protective measures can and will be taken in the event of a radiological emergency:"

a. Is it necessary to determine that emergency response plans will be implemented in the event of an accident before issuing an operating license for a nuclear power plant?

b. In an instance where the Commission is not able to make a finding that "there is reasonable assurance that protective measures can and will be taken in the event of a radiological emergency" due to lack of State and local participation, should the existing regulation be changed?

c. Should the Commission have the authority to issue an operating license, notwithstanding a negative finding by the Federal Emergency Management regarding whether emergency

One Eagle Square
Concord, NH 03301
(603) 224-0483

167 Main Street
Berlin, NH 03570
(603) 752-2600

response plans provide reasonable assurance that protective measures can and will be taken in the event of a radiological emergency?

5) Should the Commission authorize issuance of a low-power operating license when resolution of substantial obstacles impeding issuance of a full-power operating license remains uncertain?

6) Do policy questions of equity and fairness to a utility and non-safety consequences constitute reasonable grounds for increasing risk to public health and safety through modification of safety standards?

7) What role should economic considerations have in any Commission decision affecting safety regulations?

8) Do you believe it necessary to maintain the regulation requiring a plume exposure pathway emergency planning zone for nuclear power plants of 10 miles in radius in order to adequately protect public health and safety?

9) What is the proper relationship between the Commission and the nuclear industry?

10) What is the proper relationship between the Commission and the public?

11) Who first contacted you to ascertain your interest in serving on the Commission? Briefly describe the succession of events leading up to your nomination.

I would appreciate a response as soon as possible and certainly before Senate consideration of your nomination.

With warmest regards, I am

Sincerely yours,

Gordon J. Humphrey, USS

GJH/jc

Stevens Institute of Technology Castle Point, Hoboken, New Jersey 07030

July 5, 1987

The Honorable Gordon J. Humphrey
531 Hart Senate Office Building
Washington, DC 20510

Dear Senator Humphrey:

Thank you for giving me your time to meet on June 24 and for your letter of June 29, 1987 with a list of questions regarding my views on issues related to the Nuclear Regulatory Commission. I am pleased to give you my responses:

1) "Do you consider offsite emergency planning an essential component of overall nuclear power plant safety independent of engineered design plant features?"

Answer. There are two key words in the question, "essential" and "independent", and each of them relates to different considerations. Permit me to deal with "independent' first. I view a nuclear power plant, the community and region in which it is located, and the region to which it supplies electrical energy as coupled elements of a total socio-technological system the parts of which should work together for the common good. Onsite and offsite components of this extended nuclear plant system must be planned and designed to provide for the protection of the health and safety of all of the people within the overall system under both normal and emergency conditions. The engineering design of onsite plant features should be carried out by including considerations of possible offsite implications and features. Also both onsite and offsite emergency plans should take account of the influence of plant engineering design on the specific nature of possible emergencies that may develop. While it is certainly convenient to view the individual components of the extended nuclear plant as separable and therefore amenable to individual analyses and planning, I believe that sound systems engineering practice would suggest that the interplay among the component parts can be very important and should not be dismissed without considerable study and analysis on a case by case basis. Therefore I do not consider offsite emergency plans and plant features to be independent a priori, but rather to be coupled elements of a single extended system. From my point of view emergency planning offsite is of equal status to emergency planning onsite and both are essential components of the overall nuclear power plant safety system.

2) "How important is offsite emergency planning in assuring the adequate protection of the health and safety of the public in relation to the protection afforded by plant design safety features?"

Answer. This question involves the <u>relative</u> importance of plant design and offsite emergency planning in assuring the adequate protection of the health and safety of the public. An operating nuclear power plant must: 1) be designed for safety, 2) be

constructed to faithfully execute that design, and 3) be operated according to the best procedures and policies for the assurance of safety. To the extent that any of these conditions are or become unsatisfied, then the relative importance of offsite emergency plans in ensuring public safety increases. In my view, the relatively greater assurance of public health and safety in the region of an operating nuclear plant is afforded by satisfying conditions 1, 2, and 3, but it is very important that these be backstopped by offsite emergency plans to give overall the greatest assurance of protection of public health and safety. My answer to question 1) is an important part of my answer to this question.

3) "Under current regulations, the Commission cannot issue an operating license until it makes a finding that "there is reasonable assurance that protective measures can and will be taken in the event of a radiological emergency:"

a. " Is it necessary to determine that emergency response plans will be implemented in the event of an accident before issuing an operating license for a nuclear power plant?"

Answer. Before issuing an operating license the Commission must examine all of the facts on the record and determine that all existing regulations are satisfied.

b."In an instance where the Commission is not able to make a finding that "there is reasonable assurance that protective measures can and will be taken in the event of a radiological emergency" due to lack of State and local participation, should the existing regulation be changed?"

Answer. This is precisely a question that is now before the Commission as it considers a NRC staff proposal for a rule change. I understand that a large number of comments on this question have been sent to the Commission and that the Commission is now studying the question of whether existing regulations should be changed. I have not had an opportunity to review the facts and record already available to the Commission nor of course those further findings yet to be presented by NRC staff to the Commissioners. Therefore I do not have a position on this question at this time. Since this is a matter that will come before the Commission it is not appropriate for me to have adopted a position on it. That would have to develop following a review of all of the information on the record.

c." Should the Commission have the authority to issue an operating license, notwithstanding a negative finding by the Federal Emergency Management regarding whether emergency response plans provide reasonable assurance that protective measures can and will be taken in the event of a radiological emergency?"

Answer. I believe that in 1980 Congress gave the NRC authority to rely on a utility plan in emergency planning without requiring a FEMA finding, when local or state participation in the

development of the plan is absent. Whether a utility plan alone is satisfactory to assure public safety must be determined on a case by case basis with careful consideration of all safety relevant factors.

4) "Should the Commission authorize issuance of a low-power operating license when resolution of substantial obstacles impeding issuance of a full-power operating license remain uncertain?'

Answer. I am not familiar in detail with the bases that the Commission has recognized in the past for differentiating between the conditions that must be satisfied for a low power operating license as distinct from those required for a full power license. However the issuance of any license to operate a nuclear reactor should be based on a determination by the Commission that applicable law is satisfied. This question could relate to a case now before the Commission. I believe it inappropriate for me to have adopted an opinion at this time on any matter that I might be called upon to decide as a Commissioner, if confirmed.

5) "Do policy questions of equity and fairness to a utility and non-safety consequences constitute reasonable grounds for increasing risk to public health and safety through modification of safety standards?"

Answer. Equity and fairness should relate only to consistent, realistic, and even handed treatment of all licensees and potential licensees. All must be held to comparable high standards of protection of the public health and safety. Safety must be the paramount concern of the Commission in applying its standards.

6) "What role should economic considerations have in any Commission decision affecting safety regulations?"

Answer. The primary consideration in any Commission decision affecting safety regulations must be the effect on public safety and health, and that a high base level of safety expectation is maintained. Economic or other factors must not be important in determining that basic floor. Having assured itself that this basic requirement is satisfied, it is rational that the Commission consider the costs versus benefits of additional possible requirements. The Commission is required under the National Environmental Policy Act to consider economic and environmental costs and benefits as contained in the environmental impact statements that come to it as part of the licensing process.

7) "Do you believe it necessary to maintain the regulation requiring a plume exposure pathway emergency planning zone for nuclear power plants of 10 miles in radius in order to adequately protect public health and safety?"

Answer. I believe that the size of the plume exposure pathway emergency planning zone for nuclear power plants should be based on the best available data and studies, and that the acquisition of that data and the refinement of those studies should be an ongoing activity of the NRC. If as a result of those studies and data, fully and independently checked and verified, a redefinition of the emergency planning zone is either called for to ensure the health and safety of the public or could be made with that same

assurance, then I would be prepared to seriously consider a redefinition of the size of the zone.

8) "What is the proper relationship between the Commission and the nuclear industry?"

Answer. The NRC is an independent regulatory agency that must render its decisions on the basis of a publicly open record. The NRC must continually monitor the performance of its licensees and demand that the highest possible standards of safety are being met, and that even higher possibilities are being pursued. It must promptly and vigorously enforce its regulations, which must themselves be established on the very best professionally recognized technical and factual basis. There must be continuing communication between industry and the NRC on safety matters. It is important that the expanding base of practical experience and accumulated technical knowledge in industry be available and communicated to the NRC and that there be ongoing cooperation between the NRC and industry in the promotion of safety and the protection of the environment.

However, as a regulatory agency whose credibility with the public is vital, the NRC must maintain a distinct, perceptible distance from industry and a totally professional posture that recognizes that distance. This is no simple matter to achieve credibly, but a truly superior and safe nuclear industry requires effective professional communications between the industry and the regulating agencies which oversee it. In its relations with industry the NRC must encourage excellence in safe performance and cooperate with industry in the achievement of that objective. Communication does not imply the relaxation of vigilance or the weakening of oversight or vigorous enforcement.

9) "What is the proper relationship between the Commission and the public?"

Answer. The NRC's central responsibility is to regulate the use of nuclear energy so as to protect the environment and the health and safety of the public. It is very important that in discharging that responsibility the Commission does so in a manner of openness and candor that clearly demonstrates to the public and its elected representatives that the Commission's priorities and actions are assiduously directed to the successful fulfillment of that mission in an unbiased and firm manner. The Commission must keep the public informed of its actions and must provide ample opportunity for public expression of opinion and concern. The Commission must bring to bear the very best professional expertise and judgements on all matters which come before it and must conduct public hearings and inform the public of the basis for all of its decisions and actions. The Commission must be attentive and responsive to the elected representatives of the public and it must scrupulously follow all applicable laws such as the Sunshine and Environmental Acts, but at the same time it must also exercise fully its own responsibility for decision making and action based upon its findings of fact and established knowledge. It is important that the Commission both act and be perceived by the public to act according to the highest standards of professional service to the nation.

10) "Who first contacted you to ascertain your interest in serving on the Commission? Briefly describe the succession of events leading up to your nomination."

Answer. In December 1986, during the course of a two day quarterly meeting of the external expert consultants (M. Gottlieb, S. Levy, E. P. Wilkinson, W. Witzig) brought in by PSE&G and myself to review and evaluate all nuclear operations of the company from a safety point of view, the possibility of an opening developing on the NRC came up in informal discussions. I remarked casually that I might have a future interest in such a position. I was then in the middle of my fifteenth year as president of Stevens Institute of Technology and had begun to consider the eventuality of my voluntarily leaving that position, probably sometime in the ensuing two or three years. Within a week or two after returning home from the meeting of the Nuclear Oversight Committee I received a call from one of the consultants (E. P. Wilkinson) and also a call from a former Department of Energy official (S. Brewer). I do not recall which came first. Each of these calls concerned my possible interest in being recommended for appointment to the Commission. I responded that I would like to consider and think more seriously about it and would get back to them. After making an effort to learn more and understand more fully the responsibilities of the Commission and how it carries out those responsibilities by meeting with an NRC Commissioner (L. Zech), I responded to the inquiries that I would be seriously interested in being considered for such an appointment. I then communicated my interest to two colleagues, one connected with industry (S. J. Lukasik) and one in government (F. Guarini). Once I had decided in my own mind that I was seriously interested and would accept nomination for such an appointment if it came about, I sought endorsement for it from members of New Jersey's congressional delegation, several additional Representatives (J. Courter, M. J. Rinaldo) and our Senators (B. Bradley, F. Lautenberg). They all knew me and I understand have written additional letters of endorsement to President Reagan, as did T. Kean, the Governor of New Jersey, who had appointed me in the past to several New Jersey Commissions. Over the last six months I have had several occasions to meet with different executives (R. K. Campbell, W. S. Lee, L. L. Smith) of several utilities with nuclear operations at which the present and future of nuclear power in the U.S. and abroad were discussed. However, I have not discussed with them specific matters connected with the NRC other than those relating to PSE&G, with which I was familiar as a director and member of the Nuclear Oversight Committee, and then only with PSE&G executives (J. Ferland, C. McNeill). These people were aware of my interest in the Commission and indicated their endorsement of it, but sought no response from me.

In early March I was invited to the Department of Energy to meet with J. S. Herrington and the White House to discuss the possibility of my being nominated for the NRC by the President. I met with several people on the President's staff (R. H. Tuttle, S. P. Phillips) and discussed only very general matters concerning my background and views regarding nuclear power in the U.S.

In mid March I was informed by White House staff (R. H. Tuttle) that I was under serious consideration as the President's nominee and that a background check would commence shortly that would take ten to twelve weeks.

In early June I was informed again by White House staff (R. H. Tuttle) that the President was sending my name to the Senate as his nominee, and that was done on June third or fourth.

NAME	AFFILIATION
R. Bradley	U. S. Senator (NJ)
S. Brewer	Combustion Engineering Corp.
R. Campbell	Pennsylvania Power & Light Co.
J. Courter	Member of Congress (NJ)
J. Ferland	Public Service Electric & Gas Co. (NJ)
M. Gottlieb	(RET.) Director, Plasma Physics Lab Princeton University
F. Guarini	Member of Congress (NJ)
J. S. Herrington	U. S. Department of Energy
F. Lautenberg	U. S. Senator (NJ)
W. S. Lee	Duke Power Co.
S. Levy	S. Levy, Inc.
S. J. Lukasik	Northrop Corp.
C. McNeill	Public Service Electric & Gas Co. (NJ)
S. Phillips	White House Staff
M. J. Rinaldo	Member of Congress (NJ)
S. S. Smith	Carolina Power & Light Co.
R. H. Tuttle	White House Staff
E. P. Wilkinson	Consultant, Past Chairman, Institute of Nuclear Power Operations
W. Witzig	(RET.) Head Department of Nuclear Engineering, Penn State University
L. Zech	Chairman, U.S. Nuclear Regulatory Commission

Respectfully yours,

Kenneth C. Rogers

Kenneth M. Rogers

Senator BURDICK. With that, the committee stands adjourned.
[Whereupon, at 3:25 p.m., the committee adjourned.]
[Responses to a committee questionnaire follow:]

UNITED STATES SENATE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

STATEMENT FOR COMPLETION BY PRESIDENTIAL NOMINEES

Name: ROGERS (Last) KENNETH (First) CANNICOTT (Middle)

Position to which nominated: COMMISSIONER, U.S. NUCLEAR REGULATORY COMMISSION Date of Nomination: JUNE 4, 1987

Date of birth: 21 (Day) MARCH (Month) 1929 (Year) Place of birth: TENNECK, NEW JERSEY USA

Marital status: MARRIED Full name of spouse: KATHARINE LYLE MUNZER ROGERS

Name and ages of children:

MARGARET RUTH ROGERS	26
CHRISTOPHER MARTIN ROGERS	24
THOMAS JOHN ROGERS	21

Education:

Institution	Dates attended	Degrees received	Dates of degrees
COLUMBIA UNIV. NY, NY	1952 - 1956	PH. D.	JUNE 1956
COLUMBIA UNIV. NY, NY	1950 - 1952	M.A.	JUNE 1952
ST. LAWRENCE UNIV CANTON, NY	1946 - 1950	B.S.	JUNE 1950

Employment record: List all positions held since college, including the title and description of job, name of employer, location, and dates. If you were terminated involuntarily from any position(s), please note the circumstances.

12/71 TO PRESENT	STEVENS INSTITUTE OF TECHNOLOGY	HOBOKEN N.J.	PRESIDENT & CHIEF EXECUTIVE OFFICER
6/71 TO 12/71	"	"	PROVOST & DEAN OF THE FACULTY (CHIEF ACADEMIC OFFICER)
9/68 TO 6/71	"	"	HEAD, DEPARTMENT OF PHYSICS
6/67 TO 9/68	PRINCETON UNIVERSITY PLASMA PHYSICS LAB.	PRINCETON N.J.	VISITING RESEARCH SCIENTIST

Employment record—Continued

9/57 To 6/62	Stevens Institute of Technology	Hoboken N.J.	Faculty Member; Teaching & Research in High Energy Particle & Plasma Physics
12/55 To 6/57	Cornell Univ. Nuclear Physics Lab	Ithaca N.Y	Research Scientist
6/53 To 12/55	Columbia Univ. Nevis Cyclotron Lab.	Irvington N.Y	Research Assistant & Doctoral Student
Prior To 6/53	Columbia Univ. New York, N.Y.	New York N.Y	Part-time Research Positions
1974 To 1976	Public Service Electric & Gas Co	Newark N.J	Director & Member Nuclear Operations Comm.
1976 To Present	Public Service Enterprise Group	Newark N.J.	"
1973 To Present	First Jersey National Bank & First Jersey Nat. Corporation	Jersey City, N.J.	Director
1962 To 1970	Vitro Laboratories	West Orange N.J.	Consultant
1966 To 1968	Stanford Research Institute	Menlo Park CA	Consultant
1962 To 1969	Grumann Aircraft Engineering Corp.	Bethpage N.Y.	Consultant
1970 To 1976	Protochem Industries	Fairfield N.J.	Consultant

Honors and awards: List significant scholarships, fellowships, honorary degrees, military medals, honorary society memberships, and any other special recognitions for outstanding service or achievement.

Honorary Degrees: Stevens Institute of Technology, Master of Engineering 1964, Doctor of Engineering 1981; St. Lawrence University, Doctor of Humane Letters, 1983.

Elected to Fellow Status, American Assoc. for the Advancement of Science 1963.

Recipient of the First Hudson County (NJ) Humanitarian Award, National Conference of Christians and Jews, 1985

Memberships: List significant memberships and offices held in professional, fraternal, business, scholarly, civic, charitable and other organizations.

(Also see attachment)

Organization	Office held (if any)	Dates
Governor's Commission on Science & Technology (NJ)	Chairman Task Force on Telecommunications	1983 - 1985
NJ Commission on Science & Technology	Commissioner	1985 - Present
New Jersey Science / Technology Center	Advisory Board Member	1986 - Present
New Jersey Commission on Academic Accountability in Higher Education	Commissioner	1979 - 1980
Assoc. of Independent Technological Univ.	President 1976-1978	1972 - Present
Christ Hospital Jersey City NJ	Trustee	1956 - 1986

Qualifications: State fully your qualifications to serve in the position to which you have been named.

I HAVE MORE THAN 30 YEARS EXPERIENCE IN THE CONDUCT AND SUCCESSFUL MANAGEMENT OF SCIENTIFIC, TECHNOLOGICAL AND EDUCATIONAL ACTIVITIES RELATED TO NUCLEAR ENERGY. I HAVE HAD RECENT DIRECT EXPERIENCE IN THE OVERSIGHT OF NUCLEAR POWER PLANTS OPERATIONS FROM THE STANDPOINT OF STRENGTHENING THEIR SAFETY TO THE PUBLIC. I HAVE BEEN APPOINTED TO STATE-WIDE COMMISSIONS ESTABLISHED TO PROMOTE THE PUBLIC INTEREST IN EDUCATIONAL ACCOUNTABILITY AND IN THE EMPLOYMENT OF TECHNOLOGY TO BETTER SERVE THE NEEDS OF MY STATE. I HAVE HAD BROAD EXPOSURE TO POLICY QUESTIONS RELATING TO THE CONTROL AND USE OF SCIENCE AND TECHNOLOGY FOR THE IMPROVEMENT OF THE HUMAN CONDITION. I HAVE REPEATEDLY EMPHASIZED THE NECESSITY OF INCLUDING THE HUMANISTIC ASPECTS OF THE APPLICATION OF TECHNOLOGY AND HAVE BEEN CONCERNED WITH THE TRAINING AND EDUCATION OF ENGINEERS AND SCIENTISTS SO AS TO HARDEN THEIR CONCERNS IN THIS REGARD.

Future employment relationships:

1. Indicate whether you will sever all connections with your present employer, business firm, association or organization if you are confirmed by the Senate.

IF CONFIRMED BY THE SENATE, I WILL IMMEDIATELY RESIGN ALL PRESENT EMPLOYMENT CONNECTIONS, PAID DIRECTORSHIPS, OR CONSULTING RELATIONSHIPS BEFORE TAKING OFFICE.

2. As far as can be foreseen, state whether you have any plans after completing government service to resume employment, affiliation or practice with your current or any previous employer, business firm, association or organization.

I HAVE NO PLANS WHATSOEVER.

3. Has anybody made a commitment to you for a job after you leave government?

No

4. (a) If you have been appointed for a fixed term, do you expect to serve the full term?

Yes

(b) If you have been appointed for an indefinite term, do you have any known limitations on your willingness or ability to serve for the foreseeable future?

N/A

(c) If you have previously held any Schedule C or other appointive position in the Executive branch, irrespective of whether the position required Congressional confirmation, please state the circumstances of your departure and its timing.

N/A

Financial Statement:

1. Attach a copy of your Executive Personnel Financial Disclosure Report (SF 278).

2. List sources, amounts and dates of all anticipated receipts from deferred income arrangements, stock options, uncompleted contracts and other future benefits which you expect to derive from previous business relationships, professional services and firm memberships or from former employers, clients, and customers. Amounts should be indicated by the categories established for reporting income on Form SF 278, Schedule A.

DEFERRED COMPENSATION AS A DIRECTOR OF PUBLIC SERVICE ENTERPRISE GROUP WILL BE PAID PROMPTLY IF I RESIGN FROM THE BOARD. IF CONFIRMED, I WILL TO RESIGN IMMEDIATELY. (THIS DEFERRED COMPENSATION IS LISTED ON SF 278). THIS WOULD BE PAID TO ME BEFORE TAKING OFFICE IF CONFIRMED.

3. Are any assets pledged? (Add schedule).

No

4. Are you currently a party to any legal action? THERE IS CURRENTLY A LEGAL DISPUTE BETWEEN THE TRUSTEES OF STEVENS INSTITUTE AND THE STEVENS ALUMNI ASSOCIATION, A SEPARATE CORPORATION. I'M A TRUSTEE AND OFFICER OF STEVENS INSTITUTE TOO APARTY IN THAT SUIT. ALSO SEE THE ATTACHED STATEMENT FROM PUBLIC SERVICE ENTERPRISE GROUP, OF WHICH I AM A DIRECTOR. THERE ARE NO OTHER MATTERS.

5. Have you filed a Federal income tax return for each of the last 10 years? If not, please explain the circumstances.

YES

6. Has the Internal Revenue Service ever audited your Federal tax return? If so, what resulted from the audit?

NO

Potential conflicts of interest:

1. Describe any financial or deferred compensation agreements or other continuing dealings with business associates, clients or customers who will be affected by policies which you will influence in the position to which you have been nominated.

NONE

2. List any investments, obligations, liabilities, or other relationships which might involve potential conflicts of interest, or the appearance of conflicts of interest, with the position to which you have been nominated.

IF CONFIRMED, I WILL PROMPTLY SELL ALL OF THE PUBLIC SERVICE ENTERPRISE STOCK THAT I OWN.

3. Describe any business relationship, dealing or financial transaction (other than taxpaying) which you have had during the last 10 years with the Federal Government, whether for yourself or relatives, on behalf of a client, or acting as an agent, that might in any way constitute or result in a possible conflict of interest, or an appearance of conflict of interest, with the position to which you have been nominated.

NONE

4. Explain how you will resolve any potential conflict of interest, or appearance of a conflict of interest, that may be disclosed by your responses to the above items.

IF CONFIRMED AND SEATED ON THE COMMISSION, I WILL REFRAIN FROM PARTICIPATING IN ANY NRC DECISIONS THAT SPECIFICALLY INVOLVE PUBLIC SERVICE ENTERPRISE GROUP FOR A PERIOD OF TWO YEARS FOLOWING MY TAKING OFFICE.

5. Explain how you will comply with conflict of interest laws and regulations applicable to the position for which you have been nominated. Attach a statement from the appropriate agency official indicating what those laws and regulations are and how you will comply with them. For this purpose, you may utilize a statement by the relevant agency Ethics Officer.

(Note via John Bradburn, 6/8/87): NRC Office of General Counsel is preparing a response to this question -- P. Prowitt.

Political affiliation and activities: List all memberships and offices held in, or financial contributions (in excess of $1,000), and services rendered to any political party or election committee during the last 10 years.

I AM NOW AND HAVE BEEN FOR SEVERAL YEARS A MEMBER OF THE GOVERNOR'S CLUB IN NEW JERSEY (@ $1,000/YR), WHICH SUPPORTS AND IS IDENTIFIED WITH GOVERNOR THOMAS KEAN (R). I HAVE ALSO LENT MY PERSONAL SUPPORT TO CONGRESSMAN FRANK GUARINI (D) IN HIS CAMPAIGNS IN HUDSON COUNTY NJ. I SERVED ON THE FINANCE COMMITTEE IN THE SENATE CAMPAIGN OF MILLICENT FENWICK (R) IN NEW JERSEY IN 1981 AND I WITH MY WIFE CONTRIBUTED $2,500 TO THAT CAMPAIGN.

Published writings: List the titles, publishers and dates of any books, articles, or reports you have written. (Please list first any publications and/or speeches that involve environmental or related matters.)

SEE ATTACHED LIST

Additional Matters:

1. If there is any additional information which you believe may be pertinent to the Members of the Committee in reaching their decisions, you may include that here.

No

2. Do you agree to appear before all Congressional Committees which seek your testimony?

Yes

3. Having completed this form, are there any additional questions which you believe the Committee should ask of future nominees?

No

AFFIDAVIT

KENNETH CANNICOTT ROGERS) ss, being duly sworn, hereby states that he/she has read and signed the foregoing Statement for Completion by Presidential Nominees including the Financial Statement and that the information provided therein is, to the best of his/her knowledge and belief, current, accurate, and complete.

Kenneth Cannicott Rogers

Subscribed and sworn before me this 5th day of June , 1987

Lillian A. Kilkenny
Notary Public

LILLIAN A. KILKENNY
Notary Public of New Jersey
My Commission Expires Nov. 26, 1988

Memberships: (CONTINUED)

Organization	Office held (if any)	Dates
CHRIST HOSPITAL FOUNDATION JERSEY CITY, NJ	VICE CHAIRMAN	1980 - 1986
INDEPENDENT COLLEGE FUND OF NEW JERSEY	TRUSTEE	1972 - PRESENT
ASSOCIATED COLLEGES + UNIVERSITIES OF N.J.	TRUSTEE	1973 - 1982
HUDSON COUNTY COMMUNITY COLLEGE CONSORTIUM	TRUSTEE	1971 - 1976
HOBOKEN CHAMBER ORCHESTRA	TRUSTEE	1985 - PRESENT
NEW JERSEY STATE CHAMBER OF COMMERCE	DIRECTOR	1976 - PRESENT
REGIONAL PLAN ASSOCIATION N.J. COMMITTEE	MEMBER	1982 - PRESENT
AMERICAN ASSOC. FOR THE ADVANCEMENT OF SCIENCE	NONE	1968 - PRESENT
AMERICAN SOCIETY FOR ENGINEERING EDUCATION	NONE	1970 - PRESENT
INSTITUTE FOR ELECTRICAL + ELECTRONICS ENGINEERS	NONE	1978 - PRESENT
RESEARCH + DEVELOPMENT COUNCIL OF N.J.	"	1980 - PRESENT
NEWCOMEN SOCIETY IN AMERICA	N.J. COORDINATOR	1975 - PRESENT
N.Y. ACADEMY OF SCIENCES	NONE	1970 - PRESENT
ROYAL SOCIETY OF ARTS (LONDON)	"	1976 - PRESENT
SCIENTISTS AND ENGINEERS FOR SECURE ENERGY	"	1977 - PRESENT
SIGMA XI (HON. RESEARCH SOCIETY)	"	1954 - PRESENT
SIGMA PI SIGMA (HON. PHYSICS SOCIETY)	"	1949 - PRESENT
COSMOS CLUB WASHINGTON, DC	"	1976 - PRESENT
PHI SIGMA KAPPA (SOCIAL FRATERNITY)	"	1947 - PRESENT
THE UNIVERSITY CLUB (OF NY)	"	1972 - PRESENT
AMERICAN ASSOC. FOR HIGHER EDUCATION	"	1970 - 1980
AMERICAN ASSOC. OF PHYSICS TEACHERS	"	1960 - 1970
AMERICAN PHYSICAL SOCIETY	"	1954 - 1976
NATIONAL SCIENCE TEACHERS ASSOC.	"	1966 - 1970
AMERICAN ASSOCIATION OF UNIV. PROFESSORS	"	1958 - 1972
AMERICAN CIVIL LIBERTIES UNION	"	1970 - 1980

LEGAL ACTION
(CONTINUED)

Criminal Investigation

Public Service Electric and Gas Company (PSE&G), an electric and gas utility of which I am a director, is presently cooperating with the following criminal investigation, although I do not know whether it is the subject of such investigation:

Investigation by the Essex County Prosecutor into the death apparently by hypothermia of Mrs. Willie May Ellis on or about February 14, 1987. Mrs. Ellis lived in Newark, New Jersey in a house with oil heat that had not been connected for more than five years (PSE&G does not supply oil service). PSE&G had disconnected the electric and gas service to Mrs. Ellis on January 15, 1987, in accordance with required procedures, because she had failed to pay her account. PSE&G is cooperating with the Prosecutor's investigation and has supplied documents as requested. The Board of Public Utilities of the State of New Jersey is concurrrently conducting a non-criminal investigation. Both investigations are continuing.

Civil Enforcement Investigations or Proceedings

PSE&G has been the subject of civil enforcement investigations and proceedings by various administrative agencies from time to time. Such proceedings of which I am aware, as reported by PSE&G to the Securities and Exchange Commission, are the following:

EEOC

In January 1976, PSE&G was notified by the United States Equal Opportunity Commission (EEOC) that a charge of employment discrimination under the Civil Rights Act of 1964, on the basis of race or color, sex and national origin, had been filed against PSE&G and all of the unions representing employees of PSE&G. Previous to the filing of the charge, PSE&G had submitted a considerable amount of information requested by the EEOC's Office of Voluntary Programs, and PSE&G has continued to furnish certain personnel and employment records for review by the EEOC, so that it may determine whether reasonable cause for the charge exists. PSE&G is unable at this time to predict what action, if any, the EEOC may take as a result of its review and investigation.

Environmental

In November 1984, PSE&G received a Notice of Violation under Section 113 of the Federal Clean Air Act and a Notice of Non-Compliance under Section 120 of the Clean Air Act from the United States Environmental Protection Agency (EPA), Region II, both of which alleged violation of the stack emission opacity limitations under the New Jersey Air Pollution Control Code at Hudson Generating Station, Unit No. 2. In addition, the New

Jersey Department of Environmental Protection (NJDEP) has expressed concern about dust emissions due to boiler casing leaks at Hudson. On July 24, 1986, PSE&G and NJDEP entered into an Administrative Consent Order settling all issues between them with respect to Hudson and which includes a timetable for the installation of emissions control equipment with an estimated minimum cost of $20 million. Although PSE&G believes that it has successfully corrected any stack opacity violations and believes that it will be able to achieve a satisfactory resolution with NJDEP, no assurances of such can be given. The New Jersey Air Pollution Control Code and certain municipal ordinances provide regulations for the emission of smoke. PSE&G has attempted and is attempting to comply with such regulations to the best of its ability by a number of means including the use precipitators and other equipment for the control of smoke and other stack emissions. However, the limitations of present technology make it difficult to control smoke emissions to the extent contemplated by the regulations without occasional violation. As a result, PSE&G from time to time has been cited for violations of such regulations, as a result of discharges of smoke by various of its generating stations in excess of permitted levels.

On August 22, 1983, and February 29, 1984, NJDEP requested PSE&G to provide information concerning the location, operation and disposition of all coal gasification plants ever owned or operated by PSE&G. NJDEP is investigating possible adverse health and environmental effects of the former coal gasification plants. PSE&G has identified 23 of such sites and at the request of NJDEP has submitted a complete inventory to it. PSE&G's legal responsibility for any of these sites has not yet been determined. Some of the sites were never owned, operated or used by PSE&G. NJDEP has taken the position that PSE&G may be liable for all of these sites. NJDEP prioritized the sites considering primarily the potential impact on potable ground water and surface water supplies. PSE&G is developing an approach to site investigation.

The Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), and the Federal Resource Compensation and Recovery Act of 1976 (RCRA) authorize the EPA to bring an enforcement action to compel responsible parties to take clean-up action at a disposal site that is determined to present an imminent and substantial danger to the public or to the environment because of an actual or threatened release of one or more hazardous substances from an uncontrolled hazardous waste facility. The New Jersey Spill Compensation and Control Act and the New York Environmental Conservation Law provide similar authority to NJDEP and the New York Attorney General, respectively. Because of the nature of PSE&G's business, including the production of electricity and the manufacture of gas, various by-products and substances are produced and/or handled which are classified as

hazardous under the above laws. PSE&G generally provides for the disposal of such substances through licensed independent contractors, but these statutory provisions also impose potential joint and several responsibility on the generators of the wastes for certain clean-up costs. The clean-up of such sites is receiving increasing attention from the governmental agencies involved, and PSE&G expects this trend to continue. PSE&G cannot estimate the costs which may result from these matters, but such costs could be substantial. Presently, such actions involving PSE&G include the following:

(1) The State of New York v. Shore Realty Corp. & Donald Leogrande - and - Shore Realty Corp. & Donald Leogrande v. AAR Technical Service Center, et al., Docket No. 84 Civil 0864 (CPS), commenced with respect to PSE&G on August 2, 1984 in the Federal District Court for the Eastern District of New York, involving a disposal site in Glenwood Landing, Long Island, New York.

(2) EPA, Region II, Order dated September 28, 1984, and EPA Supplemental Order dated October 30, 1984, Docket No. II-CERCLA-40106 and EPA Order on Consent dated May 29, 1985, Docket No. II-CERCLA-50112 with respect to a site operated by Renora, Inc. in Edison, New Jersey. The surface cleanup, with PSE&G participation has been completed, and investigation of possible subsurface contamination is presently underway.

(3) John F. Kenney, et al., v. Scientific, Inc., et al., Docket No. L-051533-84, Civil, commenced on August 29, 1984 in the New Jersey Superior Court, Law Division, involving damages claimed by residents in the vicinity of the Kin-Buc Landfill site in Edison, New Jersey. A tentative settlement with the plaintiffs has been reached pending resolution of certain cross-claims by other defendants. PSE&G's share of the tentative settlement would be $6,000. A proposed settlement has been submitted to the Court by the parties. To date the Court has neither accepted nor rejected this proposed settlement. In addition, Robert Duffy v. Scientific, Inc. et al., Docket No. L-076499-86, Civil, commenced on August 5, 1986 in the New Jersey Superior Court, Law Division, asserts essentially the same claims against essentially the same defendants as in the Kenney suit, above, with respect to the Kin-Buc site. However, this complaint was never served on the defendants and it is believed that the sole plaintiff has abandoned his claim due to the high cost of pursuing the matter. Finally, by letter dated September 21, 1984, the EPA has also named PSE&G as one of many alleged generators of hazardous materials

in an effort to secure reimbursement for public monies alleged to have been expended at the Kin-Buc site.

(4) Claim by the State of New York dated October 22, 1984 under CERCLA and the New York Environmental Conservation Law with respect to Pennsylvania Avenue Municipal Landfill, Brooklyn, New York.

(5) Claim by the City of New York dated December 7, 1984 under CERCLA with respect to the following five municipal landfills, all located within the City of New York: Pelham Bay, the Bronx; Edgemere, Queens; Brookfield, Staten Island; Fountain Avenue, Brooklyn; and Pennsylvania Avenue, Brooklyn. The City alleges that the costs may exceed $50 million. In addition, The City of New York v. Exxon Corporation, et al., Docket No. 85 Civil 1939, (EW) was commenced on March 12, 1985 in the Federal District Court for the Southern District of New York with respect to these five municipal landfills. In addition to claims for cleanup costs, the City of New York has asserted claims for damages to and loss of natural resources and for costs of litigation. On March 12, 1985, the City notified the EPA of its intention to file suit against the same parties under the RCRA on the same sites. During 1986, thirteen of the primary defendants, including PSE&G, filed third party actions with, in the aggregate, brought approximately 300 additional defendants into this case.

(6) Claim by the City of New York dated December 16, 1984 under CERCLA with respect to a former chemical reprocessing facility located at 37-80 Review Avenue, Long Island City, Queens, New York. In addition, The City of New York v. United Technologies Corporation, et al., Docket No. 85 Civil 4665 was commenced on June 14, 1985 in the Federal District Court for the Southern District of New York with respect to the Review Avenue reprocessing facility. The City of New York has asserted claims for the reimbursement of cleanup costs incurred and to be incurred by the City, for damages to and loss of natural resources, for additional investigation and cleanup activities, and for costs of litigation. On March 21, 1985, the City notified EPA of its intention to file suit against the same parties under the RCRA with respect to this same site. During 1986, certain of the primary defendants filed third party actions which brought approximately 35 additional defendants into this case.

(7) Claim by EPA, Region III, dated December 25, 1984 under CERCLA with respect to a site owned and/or

operated by Sealand Ltd. in Mount Pleasant Township, New Castle County, Delaware. In addition, United States of America v. Consolidated Rail Corporation, et als., Civil Docket No. 85-502 was commended on August 21, 1985 in the Federal District Court for the District of Delaware with respect to the Sealand Ltd. site. This suit asserts claims for the reimbursement of cleanup costs incurred and to be incurred by the United States of America.

(8) Claim by United States Department of the Interior, dated March 5, 1985 under CERCLA with respect to the Pennsylvania Avenue and Fountain Avenue landfills located within the Gateway National Recreational Area, Brooklyn, New York. These are two of the landfills referred to in (4) and (5) above. The claim alleges that the costs are estimated at $190 million subject to modification.

(9) EPA, Region II, Order dated March 22, 1985, Docket No. II-CERCLA-50107 with respect to a site owned and/or operated by Duane Marine Salvage Corporation in Perth Amboy, New Jersey. The surface cleanup, with PSE&G's participation, was completed during 1986.

(10) Claim by EPA, Region II, dated March 29, 1985 under CERCLA for approximately $4 million with respect to a site formerly operated by Edgewater Terminals, Inc., Quanta Resources Corporation and others in Edgewater, New Jersey. PSE&G, together with other similarly situated parties, entered into an agreement with EPA, dated September 27, 1985, resolving all claims by EPA as to the surface cleanup at the subject site. In addition, James V. Frola and Albert Van Dahln v. A. G. Becker Paribas, Inc. et al., Docket No. L-087771-85, was commenced with respect to PSE&G on November 22, 1985 in the New Jersey Superior Court, Law Division, wherein the plaintiff owners of the property on which the Edgewater facility is located seek indemnity and defense costs from all those who allegedly contributed to the contamination of the site.

(11) EPA Order dated December 23, 1985, Docket No. II-CERCLA-60103 with respect to a site owned and/or operated by Scientific Chemical Processing, Inc. (SCP) at 411 Wilson Avenue, Newark, N.J. The surface cleanup, with PSE&G's participation, was completed during 1986.

(12) Inquiry and prospective enforcement action by NJDEP with respect to a site formerly leased and operated

by Coastal Services, Inc. at 632 So. Front Street, Elizabeth, N.J.

(13) Claim by NJDEP under the New Jersey Spill Compensation and Control Act with respect to the alleged subsurface contamination of water wells of the Township of Essex Fells by materials originating at the Roseland Switching Station. While PSE&G has not yet been formally dismissed from this proceeding, hydrogeologic investigations conducted by a consultant laboratory under contract to PSE&G have established that PSE&G is not the source of any subsurface contamination that may be present in the water wells. The findings of these investigations have been confirmed and accepted by the NJDEP Division of Water Resources, Enforcement Element. PSE&G was so advised of the acceptance of the finding in a letter from NJDEP dated May 16, 1986.

(14) Michigan Development Corp. et al. v. Fea Associates, Inc., V. F. Bradway & Sons, et als. v. PSE&G, Docket No. C-2341-85E, commenced with respect to PSE&G on December 2, 1985 in the New Jersey Superior Court, Chancery Division, involving a fourth-party action against PSE&G concerning a site in Atlantic City, New Jersey which allegedly was the location of a gas manufacturing plant. A stipulation of dismissal without prejudice with respect to PSE&G was filed with the Court on September 29, 1986.

(15) Prospective enforcement action by NJDEP with respect to a site formerly owned by the Township of Hillsborough, New Jersey and used for a sanitary landfill and presently owned by PSE&G. NJPDES draft permits have been issued by NJDEP to PSE&G and adjoining property owner to sink monitoring wells on these premises. The wells have been established and groundwater is being monitored.

(16) Inquiry and prospective enforcement action by EPA, Region II, with respect to a site located in Gloucester Township, New Jersey, and formerly owned and operated by Anthony Amadei, Anthony Amadei Sand & Gravel, Inc. and Gloucester Environmental Management Services, Inc. (GEMS).

(17) State of New Jersey, Department of Environmental Protection vs. Gloucester Environmental Management Services, Inc. (GEMS), et al., Docket No. 84-0152 (SSB) filed in the U. S. District Court for the District of New Jersey some time ago. The Fourth Amended Complaint, filed October 28, 1986, lists PSE&G and approximately forty other alleged generators of hazardous waste materials as

defendants. PSE&G investigated possible involvement with the GEMS site in Gloucester Township, Camden County, in June, in response to an inquiry from the EPA under Section 104(e) of the federal Superfund law. That investigation revealed that certain waste materials originating at a PSE&G facility may have contained asbestos and may have been taken to the GEMS site by an independent contractor performing removal work for PSE&G. The potential liability to which PSE&G may be exposed in this matter cannot be estimated at this time, but it could be substantial.

(18) NJDEP has requested PSE&G to enter into a consent order with Pittsburgh Plate Glass Company and the present owner of property on Garfield Avenue in Jersey City, New Jersey for evaluation and possible cleanup of the site, part of which was the former Halladay Street Gas Plant site.

(19) NJDEP has actively pursued the testing and possible cleanup of a site in Paulsboro, New Jersey, which had been a former gas manufacturing site.

(20) Inquiry and prospective enforcement action by NJDEP against the present owner of certain property located in West Paterson, New Jersey. The owner of the property has alleged that PSE&G disposed of certain hazardous material at the site from its now-closed Paterson Gas Plant. PSE&G denies the allegations and will vigorously defend any subsequent litigation.

On September 30, 1982, EPA issued an Enforcement Order to PSE&G alleging that certain of the non-nuclear discharges from the Salem Generating Station had exceeded limits in the National Pollutant Discharge Elimination System Permit for Salem. As a result, in May 1983, PSE&G entered into a Consent Order with EPA and NJDEP which required PSE&G to construct additional waste treatment facilities at Salem. Construction was completed.

In April 1980, the Federal government, for the Administrator of the EPA, commenced a civil action in the United States District Court for the Eastern District of Pennsylvania against Metal Bank of America, a Pennsylvania corporation, and others, for injunctive relief to abate an alleged continuing discharge of polychlorinated biphenyls (PCBs) into the ground water in the Delaware River in Philadelphia, Pennsylvania. The complaint alleged that Metal Bank had brought electric transformers containing PCBs onto the site and drained the oil and PCB contents thereof into an underground storage tank which then leached into the Delaware River. In addition to a mandatory injunction, the complaint prayed for an order that the defendants deposit $2 million in an escrow account or post an equivalent bond to insure compliance with the injunction. The

defendants in the action filed an answer and third party complaint against PSE&G and others, alleging that the electrical transformers were sold as scrap which Metal Bank believed contained plain mineral oil, that the third party defendants used PCBs in electrical transformers without giving notice thereof to Metal Bank and that if any oils containing PCBs are in the ground at the site and are leaching into the Delaware River, then such condition, alleged violation and any consequent injury was a result of wrongful acts of third party defendants. In July 1980, PSE&G filed an answer which denies that it has any legal liability either to the Federal government or to any of the defendants in this action and requests that the third party complaint be dismissed as to PSE&G.

Federal Energy Regulatory Commission

Without authorization by the Federal Energy Regulatory Commission (FERC), the Federal Power Act prohibits, among other things, an individual from serving as a director or officer of a utility and as a director or officer of any company supplying electrical equipment to the utility. Under this provision, March 19, 1979, FERC issued a formal Order of investigation which raised the question whether D. Wayne Hallstein, and C. Malcolm Davis, former directors of PSE&G, could continue to serve as directors of PSE&G because they were also directors of Ingersoll-Rand Company and Pennwalt Corporation, respectively, both of which allegedly supplied electrical equipment to PSE&G. For many years, PSE&G made modest purchases from Ingersol Rand and from Pennwalt involving a small fraction of the total sales of each company and a small fraction of the equipment and materials purchased by PSE&G. PSE&G took the view that the materials supplied were not "electrical equipment", and therefore, the above provision did not apply. Messrs. Hallstein and Davis are no longer on the PSE&G Board, and FERC never took any formal action subsequent to the issuance of the Order of investigation.

Nuclear Regulatory Commission

On February 27, 1987, the Nuclear Regulatory Commission (NRC) held an enforcement conference as a result of PSE&G's notification to the NRC that Salem 2 had been operated for a short period of time with an emergency core cooling system in an inoperable condition. PSE&G cannot predict what action, if any, the NRC may take as a result.

On November 13, 1986, the NRC notified PSE&G that an inspection relating to equipment qualification at the Salem Generating Station had revealed a number of deficiences in certain procedures. Seven of the deficiencies were classified by the NRC as potential enforcement/unresolved items and were referred to the NRC Regional Office for further action. PSE&G has submitted to the NRC explanations with respect to certain of

the alleged deficiencies and has instituted certain corrective actions.

On November 10, 1986, the NRC notified PSE&G of concerning relating to the failure rate in the solid state logic system which conrols all automatic safety systems at Hope Creek. PSE&G has committed to the NRC to take certain actions designed to assure the proper operation of this system. The NRC accepted PSE&G's corrective actions with respect to this matter.

On October 6, 1986, the NRC notified PSE&G that it would hold an enforcement conference (subsequently scheduled for November 17, 1986) to discuss the NRC's concerns with respect to the operation of the Hope Creek Generating Station at a time when the reactor-building-to-supression-chamber-pressure-relief system was in an inoperable condition because of an improper design. This condition was discovered by PSE&G during testing and has since been corrected.

On January 4, 1985, the Staff of the NRC issued a letter to PSE&G advising it that certain deficiencies with respect to PSE&G had been found in the annual emergency exercise for Salem held in October 1984. On March 26, 1985, the NRC Staff notified PSE&G of its proposal to assess a civil penalty of $50,000 as a result of such deficiencies. PSE&G paid the penalty.

On March 2, 1984, the NRC issued a report with respect to an inspection of Salem 1 in December 1983 and January 1984 for compliance with the NRC's fire protection requirements. The report indicates that certain areas are not in compliance with such requirements and that certain additional information is required. In accordance with accepted NRC practices, PSE&G has submitted exemption requests with respect to certain of such requirements and has supplied the additional information requested. If all of the plant modifications and changes in procedures currently indicated by the NRC are ultimately required, it is estimated that PSE&G's share of the cost thereof could amount to approximately $5 million. PSE&G cannot predict what further action, if any, the NRC may take in this matter. PSE&G is also conducting an internal review of the NRC's fire protection requirements as they related to Salem. The result of such review could result in additional fire protection enhancements at Salem, the cost of which could be substantial.

Salem 1 was shut down for an annual refueling and maintenance outage on October 15, 1982. On February 22, 1983 and February 25, 1983, while the unit was in the start-up testing phase prior to its return to service, conditions occurred which should have automatically caused a shutdown of the unit. However, the circuit breakers which are designed to automatically shut down the unit failed to operate, and in each

case the unit was manually shut down without further incident. There was no damage to the unit and no release of radiation. On May 5, 1983, the NRC Staff proposed the imposition of a civil penalty in the amount of $850,000 relating to the February Salem events. On July 6, 1983, PSE&G requested the NRC to reduce the proposed civil penalties and on September 29, 1983 the NRC denied this request. The NRC's response acknowledged that there were disagreements between PSE&G and the NRC with respect to the matters involved, but that the NRC believed that such penalties would contribute to continued efforts toward long-term compliance with NRC requirements by PSE&G and other licensees. PSE&G paid the civil penalty in October 1983.

PSE&G owns a 42.49% interest in Peach Bottom Generating Units No. 2 and 3, which are operated by Philadelphia Electric Company (PE). PE's requests for exemptions from schedule requirements for fire protection as they relate to Peach Bottom Units 2 and 3 are still pending before the NRC. On May 2, 1983, PE requested authorization for continued operation of Peach Bottom Units 2 and 3 until full compliance with the NRC requirements had been achieved. Since May 2, 1983, PE has been filing with the NRC current information, status reports and requests for exemptions, including exemptions from schedules which otherwise would have required completion of certain activities prior to April 1, 1983. The NRC has approved all of PE's submissions dealing with technical exemptions to the provisions of the NRC's regulations. On April 11, 1986, the NRC directed PE to complete a safe shutdown confirmatory program on or before September 30, 1986. In addition, the NRC mandated that alternative shutdown modifications for Peach Bottom Unit 2 and common modifications for Peach Bottom Units 2 and 3 be completed and operational before restart from the next refueling outage. On September 30, 1986, PE submitted a safe shutdown confirmatory program to the NRC. The program identified additional modifications needed to conform Peach Bottom Unit 3 with the fire protection regulations. In connection with the submission, PE has requested permission from the NRC to defer the Peach Bottom Unit 3 modifications until its next refueling outage, currently scheduled for September 1987. The failure to obtain exemptions or comply with such requirements could result in the imposition of civil penalties and in the suspension of authority to operate the Peach Bottom units.

PE has advised PSE&G that, by letter dated February 9, 1987, and accompanying Notice of Violation, PE was notified by the NRC of a proposed $50,000 fine in connection with the dismissal of an employee of a subcontractor at Peach Bottom. The NRC alleged that the worker was dismissed as a result of his having raised concerns regarding whether he had received in March 1985 a radiation exposure in excess of the regulatory limit and belief that he had informed the NRC of his concerns.

PE has advised PSE&G that by letter dated June 9, 1986, PE was notified by the NRC of a proposed $200,000 fine for failure to follow Technical Specifications at Peach Bottom Unit 3. The incident occurred on March 18, 1986, when a control rod was withdrawn out of sequence from the reactor core during startup. The NRC increased the proposed fine by 100% over the base amount and indicated in its Notice of Violation that such action was taken in part because the enforcement history at Peach Bottom regarding adherence to procedures had been poor. On July 23, 1986, PE responded to the Notice of Violation. PE admitted the two violations of Technical Specifications but contested the NRC's proposed increase. By correspondence dated December 12, 1986, the NRC rejected PE's request to mitigate the amount of the penalty. PE subsequently paid in full the assessed $200,000 fine on December 24, 1986.

PSE&G has been advised by PE that on June 18, 1984, the NRC Staff issued a Notice of Violation and proposed imposition of civil penalties asserting failure to conform to certain technical specifications applicable to Peach Bottom Units 2 and 3. The civil penalty of $30,000 was paid to the NRC on July 18, 1984. At the same time the NRC Staff issued an order requiring PE to submit to the NRC within 60 days, for its review and approval, a plan for appraisal of certain aspects of PE's procedures at Peach Bottom 2 and 3. On August 15, 1984, PE submitted to the NRC proposed plans of appraisal of certain aspects of PE's procedures at Peach Bottom Units 2 and 3. The NRC approved the appraisal plans on September 4, 1984.

KENNETH C. ROGERS - PUBLICATIONS

Particle Physics

1. Rest Mass Energy of the Negative Pion, R.C. Cornelius, C.P. Sargent, M.C. Rinehart, L.M. Lederman, and K.C. Rogers, Phys. Rev. 92, 1583, (1953).

2. The Internal Conversion of Mesic Gamma Rays, C.P. Sargent, M.C. Rinehart, R.C. Cornelius, L.M. Lederman, and K.C. Rogers, Phys. Rev. 93, 917, (1954).

3. Diffusion Cloud-Chamber Study of Very Slow Mesons I. Internal Pair Formation, C.P. Sargent, R. Cornelius, M. Rinehart, L.M. Lederman, and K.C. Rogers, Phys. Rev. 98 1349-1354 (1955).

4. Diffusion Cloud-Chamber Study of Very Slow Mesons II. Beta Decay of the Muon, C.P. Sargent, M. Rinehart, L.M. Lederman, and K.C. Rogers, Phys. Rev. 99, 885-890 (1955).

5. Absorption of Pions in Carbon and Nitrogen, P. Ammiraju, M. Rinehart, K.C. Rogers, and L.M. Lederman, Phys. Rev. 98, 1188 (1955).

6. Diffusion Cloud Chamber Study of Very Slow Mesons III. Scattering of Negative Pions in Hydrogen, M.C. Rinehart, K.C. Rogers, and L.M. Lederman, Phys. Rev. 100, 883-885 (1955).

7. Interactions of 85 Mev Positive Pions with Deuterium, K.C. Rogers, and L.M. Lederman, Phys. Rev. 105, 247-255 (1957).

8. Diffusion Cloud-Chamber Study of Multiple Photo-meson Production in H_2 at the Cornell Synchrotron, J.M. Sellen, G. Cocconi, E.L. Hart, and K.C. Rogers, Bull. Am.. Phys. Soc. Series II, 2, 195 (1956).

9. Pair Production in the Field of an Electron by the Gamma Ray Beam of the Cornell Synchrotron, E.L. Hart, G. Cocconi, V.T. Cocconi, K.C. Rogers, and J.M. Sellen, Bull. Am. Phys. Soc. Series II, 2, 172 (1956).

Plasma Physics

10. Operation of an Alkali-Metal Plasma Gun, K.C. Rogers and D.R. Simon, Bull. Am. Phys. Soc. II, 9, 341 (1964).

11. High Frequency Properties of Peaking Strip Probes, H.J. Huber and K.C. Rogers, Rev. Sci. Instr., 35, 801 (1964).

12. Diffusion Anomalies in Quiescent Magnetoplasmas, K.C. Rogers, P.G. Stern, and H. Huber, Proceedings of Fifth Symposium on Engineering Aspects of Magnetohydrodnamics M.I.T. Cambridge, Mass., April 1964.

13. Properties of Alkali-Metal Magnetoplasmas Related to "Enhanced Diffusion", N. Wolf and K.C. Rogers, Bull. Am. Phys. Soc. II, 10, 213 (1956).

14. Runaway Electrons in a Plasma Betatron, L. Ferrari and K.C. Rogers, Bull. Am. Phys. Soc. II, 10, 214 (1964).

15. Properties of Alkali-Metal Magnetoplasmas Related to "Enhanced Diffusion", N. Wolf and K.C. Rogers, Proceedings of International Symposium on Diffusion of Plasma Across a Magnetid Field, Feldafing/Starnberger See, June 29 to July 3, 1964.

16. Properties of Alkali-Metal Magnetoplasmas Related to Enhanced Diffusion, K.C. Rogers and N. Wolf, Proceedings of the Seventh International Conf. on Ionization Phenomena in Gases, Belgrade, 1965 (Gradjevinska Knjiga Publishing House, Belgrade, 1966).

17. Diffusion Measurements in a "Q" Device with a Screened Probe, N. Wolf and K.C. Rogers, Bull. Am. Phys. Soc. II, 11, 567 (1966).

18. Diffusion and Instabilities in "Q" Machine Plasmas, K.C. Rogers, N.S. Wolf, G. Courville, and R. Motz, Plasma Instabilities and Anomalous Transport ed. by W. Pardo & H.S. Robertson, U. of Miami Press, Coral Gables, Florida, 1966.

19. Spectroscopic Investigations of the Helium Short Arc, D.R. Simon and K.C. Rogers, J. Appl. Phys., 37, 2255 (1966).

20. Cross-Field Diffusion of Quiescent Potassium Magnetoplasmas, N.S. Wolf and K.C. Rogers, Phys. Fluids, 9, 2294 (1966).

21. Experimental Study of Runaway Electrons in a Plasma Betatron, L.A. Ferrari and K.C. Rogers, Phys. Fluids, 9, 2294 (1966).

22. Construction of the Guide Field for a Low Inductance Air-Core Plasma Betatron, L.A. Ferrari, K.C. Rogers, and A. Jermakian, Rev. Sci. Instr., 38, 1697 (1967).

23. Observation of the Negative-Mass Instability in a Plasma Betatron, L.A. Ferrari, K.C. Rogers, and R.W. Landau, Phys. Fluids, 11, 691 (1968).

24. A New Method for Measuring dc Electric Fields, F.F. Chen and K.C. Rogers, Bull. Am. Phys. Soc. II, 13, 1499 (1968).

25. Direct Measurement of Drift-Wave Growth Rates, K.C. Rogers and F.F. Chen, Bull. Am. Phys. Soc. II, 13, 1548 (1968).

26. Drift-Wave Stabilization by Dawson Rings, K.C. Rogers and F.F. Chen, Bull. Am. Phys. Soc. II, 13, 1547 (1968).

27. Drift Waves in Nonuniform Electric Fields, F.F. Chen and K.C. Rogers, Bull. Am. Phys. Soc. II, 13, 1548 (1968).

28. Effect of Magnetic Shear on Confinement of a Quiescent, Asymmetric Plasma, D. Mosher, F.F. Chen, and K.C. Rogers, Bull. Am. Phys. Soc. II, 13, 1558 (1968).

29. Effect of Shear and Connection Length on Drift Waves and Plasma Confinement, F.F. Chen, D. Mosher, and K.C. Rogers, Proc. International Atomic Energy Agency Conf. on Plasma Physics and Controlled Nuclear Fusion Research CN-24/E-2.

30. Direct Measurement of Drift Wave Growth Rates, Kenneth C. Rogers, and Francis F. Chen, Phys. Fluids, 13, 513 (1970).

31. Minimum $\overline{B}$ Stabilization of Drift Waves in a Q Machine, F.F. Chen and K.C. Rogers, Plasma Phys., 12, 253 (1970).

Miscellaneous

32. Engineering Enters New Cycle of Development and Definition, K.C. Rogers, Science, Vol. 209, pp. 127-132, July 1980.